DESIGN CRITERIA

1. CODES AND SPECIFICATIONS:
INTERNATIONAL BUILDING CODE 2006
CITY OF ERIE, PA, MUNICIPAL CODE
ASCE 7-05 "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"
ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
IF THERE IS A CONFLICT BETWEEN STRUCTURAL DRAWINGS AND PROJECT SPECIFICATIONS MANUAL, SEVERE OF THE TWO SHALL GOVERN.

2. DESIGN LOADS:

2.1 DEAD LOAD:

A. FRAMING LEVEL:

· ELEVATED CAST-IN-PLACE CONC. SLAB AND BEAM FRAMING...ACTUAL WEIGHT
· MISCELLANEOUS SUSPENDED... 3 PSF
· COLUMNS, STAIRS, SPANDRELS, INFILL WALLS..................... ACTUAL WEIGHT
· CLADDING....................WIRE MESH SCREEN.. 3 PSF

B. STAIR/ELEVATOR ENCLOSURE:

· ELEVATED CAST-IN-PLACE CONC. SLAB AND BEAM FRAMING.. ACTUAL WEIGHT
· ROOFING, INSULATION (AT ENCLOSURE ROOF ONLY)...................... 5 PSF
· GLAZING, PER VERT. SQ. FT.. 25 PSF
· BRICK VENEER, PER VERT. SQ. FT... 40 PSF

2.2 LIVE LOAD (OCCUPANCY LOADS, U.N.O.):

A. FRAMING LEVEL

· PARKING STALLS, DRIVE ISLES... 40 PSF
· STAIRS AND LOBBIES
(INCLUDING BUT NOT LIMITED TO ENCLOSURES).............................. 100 PSF

B. ROOF LEVEL

· SNOW LOADS:

a) DESIGN ROOF SNOW LOAD (TO BE COMBINED WITH THE OCCUPANCY LOAD ABOVE, PER ASCE 7, CHAPTER 2)...................... 31 PSF
b) GROUND SNOW LOAD .... 40 PSF
c) SNOW EXPOSURE FACTOR.. Ce = 0.9
d) SNOW LOAD IMPORTANCE FACTOR.. I = 1.0
e) THERMAL FACTOR... Ct = 1.2
f) DRIFTING SNOW PER ASCE 7-05, ARTICLE 7.7

C. WIND LOAD (ASCE 7-05 CHAPTER 6)

· BASIC WIND SPEED... 90 MPH
· WIND IMPORTANCE FACTOR... Iw = 1.0
· WIND EXPOSURE.. B
· WIND INTERNAL PRESSURE COEFFICIENT................................. GCpi = ±0.55
· DESIGN WIND PRESSURES (CORNER DEFINITION PER ASCE 7-05, FIG. 6-17)

HEIGHT ABOVE BASE Hi, FT	MAIN WIND FORCE RESISTING SYSTEM PRESSURE, PSF		COMPONENTS & CLADDING	
	N - S	E - W	AWAY FROM CORNERS, PSF	AT CORNERS, PSF
0 - 20	14	17	25	42
20 - 40	17	19	27	44
40 - 50	17	20	27	44
50 - 65	18	21	28	45

· OCCUPANCY CATEGORY.. II
· SEISMIC IMPORTANCE FACTOR... Ie = 1.0
· SITE CLASS.. D
· MAPPED SPECTRAL RESPONSE ACCELERATIONS.. .... S1 = 7.80%g
Ss = 16.30%g
· SPECTRAL RESPONSE COEFFICIENTS.. SD1 = 0.125
SDS = 0.174
· SEISMIC DESIGN CATEGORY.. B
· BASIC SEISMIC FORCE RESISTING SYSTEMS:

PARKING STRUCTURE

INTERMEDIATE REINFORCED CONCRETE MOMENT FRAMES (C.6)
SEISMIC RESPONSE COEFFICIENT.. Cs = 0.035
RESPONSE MODIFICATION FACTOR... R = 5.0
DESIGN BASE SHEAR... 0.035 W

GENERAL NOTES

1. ALL NOTES GIVEN ON THESE DRAWINGS ARE SUPPLEMENTAL TO THE PROJECT SPECIFICATIONS AND ARE NOT INTENDED TO REPLACE THEM. IN THE EVENT OF AN APPARENT CONFLICT BETWEEN THE NOTES AND THE PROJECT SPECIFICATIONS, THE CONTRACTOR MUST OBTAIN CLARIFICATION IN WRITING FROM THE ARCHITECT/ENGINEER.

2. ALL DESIGN AND CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE MOST STRINGENT OF THE GOVERNING CODE, THE LATEST EDITION OF THE STATE AND LOCAL CODES AND ALL OTHER PERTINENT CODES, REGULATIONS AND ORDINANCES.

3. DRAWINGS ARE NOT TO BE USED FOR SHOP DETAILING OR FOR CONSTRUCTION UNLESS SPECIFICALLY INDICATED BY THE ARCHITECT/ENGINEER "FOR DETAILING" OR "FOR CONSTRUCTION". THESE DRAWINGS ARE NOT TO BE REPRODUCED FOR THE PURPOSE OF USING THEM AS SHOP DETAIL DRAWINGS.

4. STRUCTURAL DRAWINGS ARE INTENDED TO BE USED ALONG WITH CIVIL, ARCHITECTURAL, MECHANICAL & ELECTRICAL DRAWINGS. THE CONTRACTOR IS RESPONSIBLE FOR COORDINATING THE REQUIREMENTS OF ALL DRAWINGS INTO THEIR SHOP DRAWINGS AND WORK.

5. SMALL OPENINGS ARE GENERALLY NOT SHOWN ON THE STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL, MECHANICAL AND ELECTRICAL DRAWINGS FOR LOCATIONS AND DIMENSIONS OF THOSE OPENINGS. PROVIDE REINFORCING AROUND OPENINGS PER TYPICAL DETAILS SHOWN ON STRUCTURAL DRAWINGS. MULTIPLE OPENINGS SPACED CLOSER TOGETHER THAN THE DIAMETER (OR SMALLER DIMENSION FOR RECTANGULAR CONFIGURATION) OF THE LARGER OF ADJACENT OPENINGS OR 6 INCHES, WHICHEVER IS GREATER, SHALL BE TREATED AS ONE OPENING DEFINED BY OUTER TANGENT LINES CONNECTING ADJACENT OPENINGS IN A CLUSTER.

6. THE CONTRACTOR SHALL SUBMIT SLEEVE/OPENING LAYOUTS FOR ALL PIPES, CONDUITS AND SIMILAR FACILITIES PENETRATIONS THROUGH STRUCTURAL MEMBERS (ALL TRADES INCLUDED) TO THE ARCHITECT FOR APPROVAL PRIOR TO CONSTRUCTION. REFER TO TYPICAL DETAILS FOR ADDITIONAL REINFORCEMENT REQUIRED AROUND OPENINGS. SPECIFIC SITUATIONS BASED ON THE CONTRACTOR'S SELECTED ROUTING OF PIPES, CONDUITS, DUCTS, ETC., MAY REQUIRE SEPARATE ANALYSIS AND ADDITIONAL REINFORCEMENT ABOVE AND BEYOND THAT SHOWN IN TYPICAL DETAILS. SUCH ADDED REINFORCEMENT SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

7. NO OPENINGS OTHER THAN THOSE SHOWN ON DESIGN DRAWINGS AND APPROVED SHOP DRAWINGS, SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER.

8. NO FIELD REVISIONS TO ANY STRUCTURAL COMPONENT INCLUDING BUT NOT LIMITED TO SIZE, DIMENSION(S), MATERIAL(S), ETC. SHALL BE MADE WITHOUT THE WRITTEN APPROVAL OF THE ARCHITECT/ENGINEER. THIS ALSO INCLUDES REVISIONS DUE TO MISLOCATION, MISFIT, OR ANY OTHER CONSTRUCTION ERRORS. STANDARD REQUEST FOR INFORMATION DOCUMENT SHALL NOT BE USED AS A TOOL TO OBTAIN ARCHITECT'S INSTRUCTIONS CONCERNING CORRECTION(S) OF CONSTRUCTION ERRORS. NON-CONFORMANCE REPORT SHALL BE USED TO REPORT SUCH CONDITIONS AND TO REQUEST ARCHITECT'S GUIDANCE.

9. DO NOT SCALE THESE DRAWINGS, USE DIMENSIONS SHOWN ON THE DRAWINGS.

10. THE CONTRACTOR SHALL SUPERVISE AND DIRECT ALL WORK SO AS TO MAINTAIN SOLE RESPONSIBILITY FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES.

11. THE STRUCTURE IS DESIGNED TO FUNCTION AS A UNIT UPON COMPLETION. BASED ON THE CONTRACTOR'S CONSTRUCTION METHODS AND SEQUENCING OF CONSTRUCTION, THE CONTRACTOR SHALL RETAIN A LICENSED PROFESSIONAL ENGINEER TO DESIGN LATERAL SUPPORT SYSTEM REQUIRED TO RESIST LATERAL LOADS AND PROVIDE OVERALL STABILITY OF THE STRUCTURE UNTIL COMPLETION. THE CONTRACTOR SHALL FURNISH AND PROVIDE THE NECESSARY BRACING AND SUPPORTS DURING CONSTRUCTION AND SHALL BE RESPONSIBLE FOR THE OVERALL STABILITY OF THE STRUCTURE DURING CONSTRUCTION.

12. THE CONTRACTOR IS RESPONSIBLE FOR LIMITING THE AMOUNT OF CONSTRUCTION LOAD IMPOSED UPON STRUCTURAL FRAMING. CONSTRUCTION LOAD SHALL NOT EXCEED THE CAPACITY OF THE FRAMING AT THE TIME THE LOADS ARE IMPOSED.

13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER DESIGN, ADEQUATE INSTALLATION AND MAINTENANCE OF ANY AND ALL SHEETING, SHORING AND UNDERPINNING AGAINST EXISTING STRUCTURES AS REQUIRED, SO THAT THEY ARE NOT ENDANGERED BY THIS CONSTRUCTION. TEMPORARY MEMBERS AND CONNECTIONS SHALL NOT BE REMOVED UNTIL PERMANENT MEMBERS ARE IN PLACE AND FINAL CONNECTIONS ARE MADE.

14. THE CONTRACTOR SHALL PROVIDE ALL THE NECESSARY MEASURES AND PRECAUTIONS TO PREVENT DAMAGE AND SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS DURING EXCAVATION. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE THE PROJECT LIMITS, CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENTS OF THE SOIL RETENTION SYSTEM, SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

15. THE CONTRACTOR'S CONSTRUCTION AND/OR ERECTION SEQUENCES SHALL RECOGNIZE AND CONSIDER THE EFFECTS OF THERMAL MOVEMENTS OF STRUCTURAL ELEMENTS.

16. NEITHER THE ARCHITECT NOR HIS/HER CONSULTANTS SHALL BE RESPONSIBLE FOR OR HAVE CONTROL OR CHARGE OF CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES OR SAFETY PRECAUTIONS/PROGRAMS IN CONNECTION WITH THIS PROJECT. NEITHER THE ARCHITECT NOR HIS/HER CONSULTANTS SHALL BE RESPONSIBLE FOR, OR HAVE CONTROL OVER, THE ACTS OF OMISSIONS BY THE CONTRACTOR, SUBCONTRACTORS, ANY OF THEIR AGENTS, EMPLOYEES, OR ANY OTHER PERSONS PERFORMING ANY OF THE WORK, OR FOR THE FAILURE OF ANY OF THE ENTITIES OR INDIVIDUALS MENTIONED HEREIN ABOVE, TO CARRY OUT THE WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.

17. MINIMUM HEADROOM CLEARANCES SHALL BE 8'-2" FOR THE PARKING STRUCTURE .

18. ELEVATION 0'-0" = ELEVATION 273'-0" AS REFERENCED TO CITY OF ERIE, PA ELEVATION DATUM PER SURVEY (SHEET VA-101).

GENERAL FOUNDATION NOTES

1. THE FOUNDATION DESIGN IS BASED ON THE GEO-TECHNICAL ENGINEERING SERVICES REPORT, PROPOSED PARKING GARAGE STRUCTURE, VA MEDICAL CENTER, 135 EAST 38TH ST. ERIE, PA BY PSI (PSI PROJECT NO. 0139851). IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REVIEW THE SOILS INFORMATION PRIOR TO BIDDING. ALL WORK SHALL BE DONE PER THE RECOMMENDATIONS GIVEN IN THE REFERENCED GEOTECHNICAL DOCUMENTS.

2. NOT USED.

3. NOT USED.

4. A MINIMUM ALLOWABLE SOIL BEARING CAPACITY FOR ALL SHALLOW FOUNDATIONS FOUNDED UPON ENGINEERED FILL, SHALL BE 3,000 PSF AS FIELD VERIFIED AND APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER. THE BOTTOM OF FOOTING ELEVATIONS AND SOIL BEARING CAPACITIES AS SHOWN ON THE DRAWINGS ARE BASED ON THE SOIL BORING DATA AND REPORT DOCUMENTS. FINAL, EXACT ELEVATIONS AND SOIL BEARING CAPACITIES SHALL BE FIELD DETERMINED AND VERIFIED BY THE OWNER'S GEOTECHNICAL ENGINEER AND REVIEWED BY THE ARCHITECT/ENGINEER DURING CONSTRUCTION.

5. THE SOIL SUBGRADE FOR ALL MATS, PADS, FOOTINGS AND SLABS SHALL BE INSPECTED AND APPROVED BY THE OWNER'S GEOTECHNICAL ENGINEER PRIOR TO PLACING FOUNDATION CONCRETE OR CONCRETE SLABS.

6. ALL UNSUITABLE, SOFT, EXCESSIVELY YIELDING, OR ORGANIC MATERIAL SHOULD BE REMOVED FROM THE EXCAVATION TO REACH ACCEPTABLE INORGANIC GRANULAR FILL OR NATURAL COHESIVE MATERIAL ACCEPTABLE TO THE OWNER'S GEOTECHNICAL ENGINEER. THE ACCEPTABLE FINAL SUBGRADE SHALL BE PREPARED AS DIRECTED IN THE FIELD BY THE OWNER'S GEOTECHNICAL ENGINEER WITH THE USE OF CLEAN, INERT AND COMPACTABLE GRANULAR MATERIAL. EXCAVATED AND STOCKPILED SITE FILL MAY BE USED FOR ENGINEERED FILLS WHEN ACCEPTABLE TO THE OWNER'S GEOTECHNICAL ENGINEER. THE MATERIAL UNDERCUTS SHOULD EXTEND LATERALLY ON A 2(H):1(V) SLOPE A MINIMUM OF 6" AWAY FROM EDGE OF FOOTING, MAT OR PAD.

7. ALL WELL GRADED GRANULAR MATERIAL OR ON-SITE AVAILABLE MATERIAL FOR FILLS DEEMED ACCEPTABLE BY THE OWNER'S GEOTECHNICAL ENGINEER, SHALL BE PLACED IN LIFTS NOT EXCEEDING 8 INCHES IN LOOSE THICKNESS, AND COMPACTED TO A MINIMUM OF 98 PERCENT OF MAXIMUM DRY DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST (ASTM D698).

8. NO FOOTINGS OR SLABS SHALL BE PLACED INTO OR AGAINST SUBGRADE CONTAINING FREE WATER, FROST OR ICE. SHOULD WATER OR FROST ENTER A FOOTING EXCAVATION AFTER SUBGRADE APPROVAL, THE SUBGRADE SHALL BE RE-INSPECTED BY THE OWNER'S GEOTECHNICAL ENGINEER AFTER REMOVAL OF WATER OR FROST.

9. ALL FOOTINGS SUBGRADES AS REQUIRED, ALL SLAB SUBGRADES INCLUDING PIT SLABS, AND ALL BACKFILL AROUND AND ABOVE ALL FOUNDATION ELEMENTS, FOOTINGS, CAPS, MATS AND PITS, SHALL BE COMPACTED TO MINIMUM 98 PERCENT OF MAXIMUM DRY DENSITY PER ASTM D698, U.N.O.

10. THE CONTRACTOR SHALL PROVIDE ALL NECESSARY MEASURES TO PREVENT ANY FROST OR ICE FROM PENETRATING ANY FOOTING OR SLAB SUBGRADE BEFORE AND AFTER PLACING OF CONCRETE AND UNTIL SUCH SUBGRADES ARE FULLY PROTECTED BY THE PERMANENT BUILDING STRUCTURE.

11. THE CONTRACTOR SHALL LOCATE CONSTRUCTION JOINTS IN THE CONTINUOUS STRIP FOOTINGS MIDWAY BETWEEN COLUMN LINES.

12. THE CONTRACTOR SHALL LOCATE CONSTRUCTION AND CONTROL JOINTS IN WALLS AS SHOWN ON THE DRAWINGS. IF NOT SHOWN, PROVIDE VERTICAL JOINT SPACING NOT IN EXCESS OF 13'-6". MAXIMUM LENGTH OF WALL PLACEMENT IS NOT LIMITED. THE CONTRACTOR SHALL SUBMIT A PROPOSED JOINT PLACEMENT AND WALL POUR SEQUENCE TO THE ARCHITECT FOR REVIEW.

13. THE CONCRETE FOR EACH ISOLATED FOOTING OR GRADE BEAM, AS APPLICABLE, SHALL BE PLACED IN ONE (1) CONTINUOUS PLACEMENT.

14. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR LOCATING, PROTECTING AND MAINTAINING IN SERVICE ALL EXISTING UTILITIES. ANY DAMAGE TO THE EXISTING UTILITIES CAUSED BY THE CONTRACTOR SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND AT NO COST TO THE OWNER.

15. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IN THE EVENT ANY EXISTING UTILITIES, UTILITY STRUCTURES OR ANY OBSTRUCTION INTERFERES WITH THE PROPER INSTALLATION OF THE FOUNDATION WORK.

16. ALL WALL FOOTINGS SUBJECT TO FREEZE-THAW CYCLES SHALL BEAR A MINIMUM OF 3'-6" BELOW FINISHED GRADES.

17. SEE PLUMBING DRAWINGS FOR DRAINAGE SYSTEM AND SPECIAL GRANULAR FILL MATERIALS.

18. SEE ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING AND DAMPPROOFING DETAILS.

19. NOT USED.

20. THE CONTRACTOR SHALL EXERCISE DUE CARE AND CAUTION WORKING IN THE AREAS ADJOINING EXISTING CONSTRUCTION TO REMAIN. THE CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR PROVIDING AND MAINTAINING MEASURES PROTECTING EXISTING CONSTRUCTION. ANY AND ALL DAMAGE TO THE EXISTING CONSTRUCTION CAUSED BY THE CONTRACTOR'S MEANS AND METHODS AND/OR CONTRACTOR'S FAILURE TO PROVIDE PROTECTION SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AND AT NO COST TO THE OWNER.

21. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

CONCRETE NOTES

1. ALL CONCRETE WORK SHALL CONFORM TO THE REQUIREMENTS OF ACI 318 & ACI 301. THESE DOCUMENTS SHALL BE AVAILABLE IN THE FIELD OFFICE.

2. EXCEPT WHERE OTHERWISE INDICATED, CONCRETE TYPES AND MINIMUM 28-DAY COMPRESSIVE STRENGTHS SHALL BE AS FOLLOWS:

A	GRADE BEAMS	4,000 PSI REGULAR WEIGHT
B	SLAB-ON-GRADE	4,000 PSI REGULAR WEIGHT
C	WALL FOOTING PADS, ELEVATOR PIT MATS, PILE CAPS	4,000 PSI REGULAR WEIGHT
D	RETAINING WALLS , FOUNDATION WALLS, EXCEPT AS NOTED BELOW	4,000 PSI REGULAR WEIGHT
E	PRECAST CONCRETE COMPONENTS	SEE RESPECTIVE NOTES
F	PARKING STRUCTURE COLUMNS	5,000 PSI REGULAR WEIGHT
G	TYPICAL GARAGE FLOORS, ROOF FRAMING, AND "CRASH" WALLS	5,000 PSI REGULAR WEIGHT
H	ALL OTHER	4,000 PSI REGULAR WEIGHT

3. ALL CONCRETE EXPOSED TO MOISTURE AND/OR FREEZE-THAW CYCLES IN SERVICE SHALL BE AIR ENTRAINED WITH 5-7.5% AIR CONTENT. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

4. CEMENT SHALL CONFORM TO ASTM C150 TYPE I OR TYPE III. USE ONLY ONE BRAND OF CEMENT FOR ALL EXPOSED TO VIEW CONCRETE. AGGREGATES SHALL CONFORM TO ASTM C33 (REGULAR WEIGHT). ALL CONCRETE SHALL CONTAIN AN APPROVED WATER REDUCING ADMIXTURE. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION.

5. ALL REINFORCEMENT SHALL BE DETAILED AND INSTALLED WITH A MINIMUM CLEAR CONCRETE COVER IN ACCORDANCE WITH ACI 318 SECTION 7.7 OR PER THE SCHEDULE UNDER ITEM (23) HEREIN BELOW, WHICHEVER IS MORE STRINGENT. VERIFY PROPER REINFORCEMENT SPACING PER ACI 318 SECTION 7.6 BASED ON DESIGN DATA. NOTIFY ARCHITECT IF BASED ON THE CONTRACT DRAWINGS, CODE SPACING LIMITS ARE VIOLATED. IN THIS INSTANCE ARCHITECT WILL ISSUE SUPPLEMENTAL INSTRUCTIONS.

6. ALL REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 60. WHERE WELDING OF REINFORCEMENT BARS IS REQUIRED, USE REBAR CONFORMING TO ASTM A706 GRADE 60, UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185. SEE NOTE 41 BELOW FOR EPOXY COATED REINFORCEMENT. e-008

7. ALL REINFORCEMENT BARS SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES AND REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES", ACI 315. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.

8. ALL 135° HOOKS SHALL BE MINIMUM 6d, WHERE d IS BAR DIAMETER. ALL OTHER HOOKS SHALL BE STANDARD ACI 90° OR 180° HOOKS.

9. REBAR LAP SPLICES IN AUGERCAST PILES ARE NOT PERMITTED. FOR COLUMN REBAR AND DOWEL EXTENSION AND SPLICES SEE TYPICAL DETAILS. ALL REINFORCING LAP SPLICES SHALL CONFORM TO THE REQUIREMENTS OF ACI 318, LATEST EDITION. SEE REBAR TENSION LAP SPLICE SCHEDULE THIS DRAWING. MECHANICAL SPLICES SHALL CONFORM TO ACI 318 ARTICLE 12.14.3. DOWELS SHALL MATCH SIZE, NUMBER AND SPACING OF THE MAIN REINFORCEMENT, U.N.O.

10. NOT USED.

11. THERE SHALL BE NO FIELD CUTTING OF ANY REINFORCEMENT WITHOUT AN EXPRESSED WRITTEN CONSENT OF THE ARCHITECT. FIELD MODIFICATIONS TO APPROVED SHOP DRAWINGS SHALL NOT BE DONE WITHOUT ARCHITECT'S WRITTEN APPROVAL. ALL FIELD BENDING OF REINFORCEMENT SHALL BE APPROVED IN WRITING BY THE ARCHITECT, UNLESS EXPRESSLY PERMITTED ON THE CONTRACT DRAWINGS. ALL FIELD BENDING OF REINFORCEMENT SHALL BE DONE COLD. HEATING OF BARS WILL NOT BE PERMITTED. FIELD BENDING OF REINFORCEMENT LARGER THAN #5 IS NOT PERMITTED, UNLESS SPECIFICALLY APPROVED IN WRITING BY THE ARCHITECT.

12. ALL WALLS AND STRUCTURAL SLABS SHALL BE REINFORCED WITH AT LEAST #4@ 12" EACH WAY, EACH FACE, UNLESS NOTED OTHERWISE. ALL SLABS-ON-GRADE SHALL BE REINFORCED WITH STRUCTURAL FIBER AS NOTED ON PLANS. WHERE STRUCTURAL FIBER IN SLABS-ON-GRADE IS NOT REQUIRED OR IS NOT NOTED ON THE DRAWINGS, PROVIDE AT LEAST ONE (1) LAYER OF 6X6-W2XW2 W.W.F., UNLESS NOTED OTHERWISE. PROVIDE ONE (1) LAYER OF 6X6-W1.4XW1.4 W.W.F. CONTINUOUS IN ALL CONCRETE FILLS OVER THE STRUCTURAL SLAB, UNLESS NOTED OTHERWISE. ALL WELDED WIRE FABRIC REGARDLESS OF SLAB COMPONENT SHALL BE PROPERLY SUPPORTED ON APPROPRIATE CHAIRS/BOLSTERS AND TIED DOWN SECURELY.

13. PROVIDE ADDITIONAL REINFORCEMENT AT ALL OPENINGS IN WALLS AND SLABS IN ACCORDANCE WITH TYPICAL DETAILS FOR ELEVATED SLABS, WALLS AND SLABS-ON-GRADE.

14. PROVIDE ADEQUATE BOLSTER, HI-CHAIRS, SUPPORT BARS, ETC., TO MAINTAIN MINIMUM SPECIFIED CLEAR CONCRETE COVER FOR THE ENTIRE LENGTH OF ANY AND ALL BARS. PROVIDE CONTINUOUS #4 SPACER BARS IN WALLS AND SLABS TO SUPPORT DOWELS. HEAVIER SPACER BARS MAY BE REQUIRED IN BEAMS TO ALLEVIATE CONGESTION IN THE PRESENCE OF TENDON BUNDLES AND MILD STEEL REINFORCEMENT IN THE SAME OR IN PARALLEL LAYERS.

15. ALL CONSTRUCTION JOINTS SHALL BE WIRE BRUSHED, CLEANED, MOISTENED AND TREATED WITH A CONCRETE SLURRY OR NEAT CEMENT GROUT IMMEDIATELY PRIOR TO PLACING NEW CONCRETE.

16. CONSTRUCTION JOINTS: FOR WALLS SPACING OF JOINTS SHALL BE NOT MORE THAN 3 TIMES THE HEIGHT OF A SOLID WALL WITH 25 FOOT MAXIMUM. MINIMUM SPACING SHOULD GENERALLY EQUAL WALL HEIGHT. PROVIDE CONTROL JOINTS CONSTRUCTED WITH THE USE OF CHAMFER STRIPS IN ALL UPTURNED BEAMS AND "CRASH" WALLS. EXTEND JOINT OVER THE TOP OF UPTURNED BEAM OR "CRASH" WALL, AND FILL WITH SEALANT.

17. EXPANSION JOINTS SEE NOTATION ON DRAWINGS, UNLESS SPECIFIED OTHERWISE.

18. ISOLATION JOINTS: ALL SLABS-ON-GRADE SHALL BE ISOLATED FROM ADJACENT WALLS AND BUILDING COLUMNS, PER TYPICAL DETAILS, UNLESS NOTED OTHERWISE.

19. PLACE ALL SLABS-ON-GRADE AND SLABS-ON-FILL WITH AN APPROVED PATTERN AND SEQUENCE OF CONSTRUCTION AND CONTROL JOINTS TO MINIMIZE SHRINKAGE CRACKS. THE MAXIMUM SPACING BETWEEN JOINTS SHALL BE 10'-6". A SUGGESTED ARRANGEMENT AND DETAILS ARE SHOWN ON THE DRAWINGS.

20. NO CONSTRUCTION JOINT SHALL BE MADE WITHOUT REINFORCEMENT INSTALLED PERPENDICULAR TO THE PLANE OF THE JOINT. SEE DRAWINGS FOR TYPICAL DETAILS. THE FOLLOWING QUANTITIES ARE MINIMUM IN PERCENT OF CROSS SECTIONAL AREA OF A CONCRETE ELEMENT IN THE PLANE OF THE CONSTRUCTION JOINT, UNLESS SPECIFICALLY NOTED OTHERWISE IN SECTIONS AND DETAILS:

STRUCTURAL COMPONENT	LOCATIONS	PERCENTAGE	MINIMUM TRANSVERSE
SLABS	TOP & BOTTOM	0.20%	--
BEAMS	TOP & BOTTOM	0.33%	--
BEAMS	STIRRUPS, EACH SIDE OF VERTICAL JOINT	--	5-#4@8"
COLUMNS	VERTICAL	1.00%	--
COLUMNS	HORIZONTAL TIES ABOVE AND BELOW HORIZONTAL JOINT	--	5-#4@4"
WALLS	VERTICAL AND HORIZONTAL	--	SEE TYPICAL DETAILS

21. CONSTRUCTION JOINTS IN STRUCTURES SHALL BE PROVIDED IN ACCORDANCE WITH ACI 318 SECTION 6.4; FOR CONVENTIONAL CONSTRUCTION OF SLABS, WALLS AND BEAMS, PLACE VERTICAL CONSTRUCTION JOINTS (BETWEEN POURS) WITHIN THE MIDDLE THIRD OF RESPECTIVE SPANS. SURFACE OF A MEMBER CROSS-SECTION AT A CONSTRUCTION JOINT SHALL BE INTENTIONALLY ROUGHENED TO A MINIMUM 1/4" AMPLITUDE PRIOR TO PLACEMENT OF ADJACENT CONCRETE SEGMENT. STRUCTURE ON EITHER SIDE OF JOINT SHALL BE SHORED UNTIL THE AFFECTED MEMBER CONCRETE HAS ATTAINED MINIMUM 28-DAY COMPRESSIVE STRENGTH. FOR POST-TENSIONED CONSTRUCTION, PLACE CONSTRUCTION JOINTS SUCH THAT AN INTERMEDIATE STRESSING POINT IS APPROXIMATELY AT A MEMBER MID-DEPTH. GENERALLY, SHORING OF POST-TENSIONED CONCRETE MEMBERS ON EITHER SIDE OF CONSTRUCTION JOINT IS REQUIRED UNTIL THE STRUCTURE IS FULLY STRESSED. EXCEPTIONS TO THIS ARE STAGE CONSTRUCTED AND/OR STAGE STRESSED TRANSFER GIRDERS, WHICH ARE SPECIFICALLY DETAILED. IN ALL INSTANCES, LOCATIONS OF ALL CONSTRUCTION JOINTS SHALL BE REVIEWED BY THE ARCHITECT. NO HORIZONTAL CONSTRUCTION JOINTS WILL BE PERMITTED IN BEAMS, SLABS. MATS OR PADS UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS.

22. PROVIDE WATERSTOPS AT ALL CONSTRUCTION JOINTS IN ELEVATOR PITS, BASEMENT WALLS & WATER RETENTION STRUCTURES BELOW THE EXTERIOR GRADE AND/OR AS SHOWN ON THE DRAWINGS. FOR MORE INFORMATION REFER TO THE PROJECT SPECIFICATIONS.

23. UNLESS OTHERWISE NOTED, PROVIDE CLEAR CONCRETE COVER TO REINFORCEMENT IN ALL CAST-IN-PLACE CONCRETE, AS FOLLOWS, BUT IN NO CASE LESS THAN PER ACI 318, PAR. 7.7.1:

MEMBER TYPE	EXPOSED*	NOT EXPOSED
CAST AGAINST AND PERMENTLY EXPOSED TO EARTH	3"	--
BEAM - TO STIRRUP	1 1/2"	1 1/2"
BEAM - TO PRIMARY REBAR	2"	--
COLUMN - TO TIES	2"	1 1/2"
"CRASH" WALL	1 1/2"	--
GRADE BEAM - TO STIRRUP	2"	--
GRADE BEAM - BOTTOM	3"	--
GRADE BEAM - SIDE BARS	1 1/2"	--
SLAB - TOP	2"	3/4"
SLAB - BOTTOM (INTERIOR)	1"	3/4"
SLAB - BOTTOM (EXTERIOR)	1 1/2"	1"
WALL	2"	1"

24. ALL REINFORCING BAR SPLICES SHALL CONFORM TO THE FOLLOWING SCHEDULES. LAP SPLICING OF BARS LARGER THAN #11 IS NOT PERMITTED. ALL WELDED WIRE FABRIC SHALL BE LAP SPLICED OVER TWO (2) FULL MESH PANELS AND TIED SECURELY. WHERE REQUIRED, DOWELS FROM ADJACENT EARLIER PLACEMENT INTO CURRENT PLACEMENT SHALL MATCH SIZE AND NUMBER OF REINFORCING BARS, UNLESS NOTED OTHERWISE.

SCHEDULE NO. 1 - UNCOATED TOP BARS

BAR SIZE		#4		#5		#6		#7		#8		#9		#10		#11	
CLASS: LAP		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
f'c (psi)	4000	19	25	24	31	28	37	41	53	47	61	53	68	59	77	68	89
	5000	17	22	21	27	25	33	37	48	42	54	47	61	53	69	61	80
	7000	14	19	18	23	21	28	31	40	35	46	40	52	45	58	52	67

SCHEDULE NO. 2 - UNCOATED BARS OTHER THAN TOP BARS

BAR SIZE		#4		#5		#6		#7		#8		#9		#10		#11	
CLASS: LAP		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
f'c (psi)	4000	15	19	18	24	22	28	32	41	36	47	41	53	46	59	53	68
	5000	13	17	16	21	20	25	28	37	32	42	36	47	41	53	47	61
	7000	12	14	14	18	17	21	24	31	27	35	31	40	35	45	40	52

SCHEDULE NO. 3 - EPOXY COATED TOP BARS

BAR SIZE		#4		#5		#6		#7		#8		#9		#10		#11	
CLASS: LAP		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
f'c (psi)	4000	25	32	31	40	37	48	53	69	61	79	69	89	77	100	89	116
	5000	22	29	28	36	33	43	48	62	55	71	62	80	69	90	80	104
	7000	19	24	23	30	28	36	41	53	46	60	52	68	59	76	68	88

SCHEDULE NO. 4 - EPOXY COATED BARS OTHER THAN TOP BARS

BAR SIZE		#4		#5		#6		#7		#8		#9		#10		#11	
		A	B	A	B	A	B	A	B	A	B	A	B	A	B	A	B
f'c (psi)	4000	22	28	27	35	33	42	47	61	54	70	61	79	68	89	79	102
	5000	20	25	24	32	29	38	42	55	48	63	54	70	61	79	71	92
	7000	17	21	21	27	25	32	36	46	41	53	46	60	52	67	60	78

TENSION SPLICE SCHEDULE NOTES

ALL LAP SPLICE SCHEDULES PLACED ON THIS DRAWING ARE BASED ON THE FOLLOWING ASSUMPTIONS:

A. THE ABOVE SCHEDULES ARE INTENDED FOR MATS, CAPS, COLUMNS AND BEAMS/GIRDERS WITH CLEAR COVER TO REBAR NOT LESS THAN 2", AND CENTER-TO-CENTER SPACING OF BARS BEING DEVELOPED IN A LAYER OF NOT LESS THAN 4*D, WHERE d IS NOMINAL BAR DIAMETER. USE SMALLER OF THE TWO DIAMETERS IN LAP SPLICES OF BARS OF DIFFERENT SIZE.
B. FOR STRUCTURES WHERE CLEAR CONCRETE COVER TO REINFORCEMENT BEING DEVELOPED IS LESS THAN 2" BUT IS IN ACCORDANCE WITH THE NOTE 23 UNDER "CONCRETE NOTES" ABOVE, THE DETAILER SHALL REFER TO THE CRSI DESIGN HANDBOOK, SPLICE SCHEDULES IN CHAPTER 5.
C. CLEAR DISTANCE BETWEEN BAR LAYERS IN BEAMS/GIRDERS IS NOT LESS THAN 1".
D. REFER TO THE ACI 318 CHAPTER 12 FOR REQUIREMENTS ON THE BASIS OF WHICH THESE SCHEDULES HAVE BEEN ESTABLISHED FOR REGULAR WEIGHT CONCRETE AND REINFORCING STEEL YIELD STRENGTH OF Fy=6O KSI.
F. FOR TOP BAR DEFINITION, SEE ACI 318, PARAGRAPH 12.2.4.FOR PURPOSES OF DETERMINATION OF REBAR SPACING, TENDON BUNDLES IF PRESENT IN BEAMS MUST BE TREATED AS REBAR OF A DIAMETER BASED ON EQUIVALENT CROS-SECTIONAL AREA OF A BUNDLE.
G. DEVELOPMENT LENGTHS IN THESE SCHEDULES ARE IN INCHES.

25. PITCH ALL SLABS TO DRAINS WHERE DRAINS ARE INDICATED ON CONTRACT DRAWINGS.

26. PROVIDE 3/4" CHAMFER AT EDGES OF ALL CONCRETE ELEMENTS EXPOSED TO VIEW (I.E. TOPS OF RETAINING WALLS, CRASH WALLS, EDGES OF BEAMS, GIRDERS, COLUMNS, SLABS, ETC.).

27. COMPONENTS OF STRUCTURES WITHIN CONCRETE SHALL BE GIVEN THE FOLLOWING PRIORITY FOR REINFORCEMENT, EMBEDS AND HARDWARE PLACEMENT:

(1) POST-TENSIONING TENDONS;
(2) MILD STEEL REINFORCEMENT;
(3) EMBEDDED STRUCTURAL ITEMS, SUCH AS PLATES, INSERTS, ETC.
(4) EMBEDDED ARCHITECTURAL ITEMS, SUCH AS REGLETS, DRIPS, ETC.
(5) EMBEDDED CONDUITS AND/OR PIPES.

28. ELECTRICAL CONDUITS AND MECHANICAL/PLUMBING PIPES CAST INTO SLABS SHALL BE PLACED BETWEEN THE TOP AND BOTTOM LAYERS OF REINFORCEMENT, IN A WAY NOT INTERFERING WITH THE POST-TENSIONING TENDONS, WHERE APPLICABLE, AND SHALL NOT HAVE AN OUTSIDE DIAMETER GREATER THAN ONE-THIRD THE SLAB THICKNESS. CROSSOVERS OF CONDUITS AND/OR PIPES SHALL NOT BE PERMITTED. THE CLEAR DISTANCES BETWEEN CONDUITS AND/OR PIPES SHALL NOT BE LESS THAN 1.5 TIMES THE LARGER OF THE TWO ADJACENT DIAMETERS BUT IN NO CASE SHALL A CLEAR SPACING BE LESS THAN 2 INCHES.

29. IN SLABS, NO CONDUITS OR PIPES SHALL BE PLACED CLOSER THAN 12 INCHES TO A COLUMN FACE OR EDGE OF CONCRETE, UNLESS NOTED OTHERWISE.

30. DOWELS IN FOUNDATION STRUCTURES FOR THE CONSTRUCTION IMMEDIATELY ABOVE HAVE BEEN IDENTIFIED ON THE DRAWINGS. IF NO DOWELS IS INDICATED, PROVIDE AS A MINIMUM NUMBER AND SIZE MATCHING THAT OF RESPECTIVE WALL, PIER, COLUMN, ETC., IMMEDIATELY ABOVE.

31. NO BEAM NOR SLAB REINFORCEMENT SHALL BE SLEEVED THROUGH OR OTHERWISE INTERRUPTED, EXCEPT AS SHOWN ON THE STRUCTURAL DRAWINGS.

32. NO ALUMINUM OF ANY TYPE SHALL BE ALLOWED IN THE CONCRETE WORK, UNLESS COATED TO PREVENT ALUMINUM-CONCRETE REACTION.

33. DESIGN OF FORMWORK FOR CONCRETE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE DESIGN SHALL INCLUDE ALL FORCES ACTING UPON FORMWORK BEFORE, DURING AND AFTER CONCRETE PLACEMENT. THE CONTRACTOR'S PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE WORK IS TO BE PERFORMED, SHALL DESIGN ALL FORMWORK AND ASSOCIATED SHORING, BRACING AND ANCHORAGE. SEE ALSO NOTE 37 BELOW.

34. EACH SUBCONTRACTOR SHALL PROVIDE SLEEVES IN CONCRETE FORMWORK. SLEEVE LOCATION AND SIZES SHALL BE SUBMITTED TO AND APPROVED BY THE ARCHITECT PRIOR TO PLACEMENT. NO CORING OF THE CONCRETE WORK WILL BE ALLOWED WITHOUT AN EXPRESSED WRITTEN CONSENT OF ARCHITECT.

35. CONCRETE TESTING WILL BE PERFORMED BY THE OWNER'S TESTING LABORATORY IN ACCORDANCE WITH ACI 301 SUBSECTION 1.6. ACCEPTANCE OF CONCRETE WILL BE BASED ON THE RESULTS OF FIELD TESTING AS OUTLINED IN THE SPECIFICATIONS AS WELL AS ON THE LAB STRENGTH TESTING. EARLY CONCRETE STRENGTH AS REQUIRED FOR STRESSING OR FORM REMOVAL SHALL NOT BE CONSIDERED AN ACCEPTANCE CRITERION. DETERMINATION OF THIS STRENGTH TO ASCERTAIN CONSTRUCTABILITY SHALL BE PART OF THE TESTING SCOPE OF WORK PROVIDED BY THE CONTRACTOR.

FINAL SUBMISSION

Scale: 3/4" = 1'-0"

No.	Description	Date
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Revisions:		Date

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Drawing Title: STRUCTURAL GENERAL NOTES - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:13 AM | Checked: B.I. | Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: SB-001

Office of Construction and Facilities Management

Department of Veterans Affairs

CONTINUED FROM SB-001

36. FORMWORK FOR SLABS AND BEAMS SHALL BE CAMBERED TO COMPENSATE FOR DEFLECTIONS OF SHORING/FORMWORK SYSTEM DUE TO CONSTRUCTION LOADS. THIS CAMBER SHALL BE IN ADDITION TO THAT SHOWN ON THE CONTRACT DRAWINGS, IF ANY.

37. FORMWORK DESIGN FOR POST-TENSIONED STRUCTURES SHALL INCLUDE THE EFFECT OF STRESSING SEQUENCE UPON FORMWORK FRAMING, AND MUST BE COORDINATED WITH POST-TENSIONING SYSTEM MANUFACTURER.

38. THE CONTRACTOR SHALL INCLUDE INTO THE BASE BID CONTRACT THE COST FOR SUPPLYING AND INSTALLING 1,600 LBS (800 LBS EPOXY COATED) ADDED REINFORCING BARS AS DIRECTED BY THE ARCHITECT. THE OWNER SHALL BE COMPENSATED FOR PROVISIONS NOT USED.

39. THE CONTRACTOR SHALL INCLUDE INTO THE BASE BID CONTRACT THE COST FOR ROUTING AND SEALING 500 LINEAL FEET OF CONCRETE CRACKS AS DIRECTED BY THE ARCHITECT. THE OWNER SHALL BE COMPENSATED FOR THE UNUSED SEALED CRACK LENGTH.

40. NOT USED.

41. PROVIDE EPOXY COATED REINFORCEMENT IN THE STRUCTURE AS FOLLOWS:

A. IN THE PARKING STRUCTURE ONLY, ALL REINFORCEMENT AND WELDED WIRE FABRIC IN THE UPPER 3-INCH OF THE CAST-IN-PLACE ELEVATED STRUCTURAL SLAB, CURBS AND TOPPING SLABS.
B. RETAINING WALL AND FOUNDATION WALL REINFORCEMENT LOCATED AT 2" OR LESS FROM A FACE OF CONCRETE SUBJECT TO DE-ICING CHEMICALS "SPLASH-ON".
C. TOP REINFORCING BARS AND STIRRUPS FOR ELEVATED BEAMS AND GIRDERS.
D. ALL REINFORCEMENT FOR ELEVATED UPTURNED BEAMS.
E. ALL REINFORCEMENT OF PARAPET WALLS OR "CRASH" WALLS.
F. ALL REINFORCING BARS IN THE EXTERIOR FACE OF PARKING STRUCTURE STAIR/ELEVATOR TOWER CAST-IN-PLACE WALLS EXTENDING ABOVE GRADE OR ABOVE TOP OF SLAB-ON-GRADE.
G. ALL REINFORCING BARS AT CAST-IN-PLACE CLOSURE STRIPS OR INFILL SLABS.
H. ALL REINFORCING BARS AT POST-TENSIONING ANCHORAGE ZONE PER DETAIL SF-501.
I. ALL REINFORCING BARS AT STRESSING POCKETS, IF ANY.
J. ALL SUPPORT STEEL FOR EPOXY COATED REINFORCEMENT.

42. THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS, REVEALS, CURBS, SLAB DEPRESSIONS, SLEEVES, OPENINGS, ETC.

43. SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING STEEL SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ARCHITECT FOR REVIEW PRIOR TO FABRICATION.

44. SEE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

45. SEE SHEET SF-001 FOR ADDITIONAL REQUIREMENTS AND RELATED WORK.

ABBREVIATIONS

ACI	AMERICAN CONCRETE INSTIUTE
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
ADDL	ADDITIONAL
ADJ.	ADJACENT
AESS	ARCHITECTURALLY EXPOSED STRUCTURAL STEEL
AGG.	AGGREGATE
ALT.	ALTERNATE
APPROX.	APPROXIMATELY
ARCH.	ARCHITECT
B. TO B.	BACK TO BACK
BEV.	BEVEL
B.F.	BACK FACE
B.L.	BUILDING LINE
BLDG.	BUILDING
B/ OR BOT.	BOTTOM
BRDG.	BRIDGING
BTWN	BETWEEN
BRG	BEARING
C	CHANNEL
C.G.	CENTER OF GRAVITY
C.I.P.	CAST IN PLACE
C.J.	CONSTRUCTION JOINT OR CONTROL JOINT
CL	CENTERLINE
CLR.	CLEAR
C.M.U.	CONCRETE MASONRY UNIT
COL.	COLUMN
COMP.	COMPRESSION
CONC.	CONCRETE
CONN.	CONNECTION
CONST.	CONSTRUCTION
CONT.	CONTINUOUS
COV. PL.	COVER PLATE
DBL.	DOUBLE
DET.	DETAIL
DIAG.	DIAGONAL
DIAM.	DIAMETER
DIM.	DIMENSION
D.L.	DEAD LOAD
D.P.	DRILLED PIER
DWG.	DRAWING
DWLS.	DOWELS
EA.	EACH
E.F.	EACH FACE
E.J.	EXPANSION JOINT
EL.	ELEVATION
ELEC.	ELECTRICAL
ELEV.	ELEVATOR
F. TO F.	FACE TO FACE
FABR.	FABRICATOR
FIN.	FINISH
FIN. FL.	FINSHED FLOOR
FL.	FLOOR
FNDN.	FOUNDATION
FP	FIRE PROTECTION
F.S.	FAR SIDE
FT.	FOOT OR FEET
FTG.	FOOTING
GA.	GAUGE
GALV.	GALVENIZED
G.C.	GENERAL CONTRACTOR
GR.	GRADE
GR. BM.	GRADE BEAM
G.S.	GALVENIZED STEEL
H.B.	HOOKED BAR
HK.	HOOK
HORIZ.	HORIZONTAL
H.P.	HIGH POINT
H.S.	HEADED STUD
H.S.B.	HIGH STRENGHT BOLT
H.S.S	HOLLOW STRUCTURAL SECTION
HGT.	HEIGHT
I.D.	INSIDE DIAMETER
I.F.	INSIDE FACE
INFO.	INFORMATION
INT.	INTERIOR
INTERM.	INTERMEDIATE
JST.	JOIST
JT.	JOINT
K.	KIPS
K.L.F.	KIPS PER LINEAL FOOT
K.S.F	KIPS PER SQUARE FOOT
L	ANGLE
LB.	POUND
L.L.	LIVE LOAD
L.L.H.	LONG LEG HORIZONTAL
L.L.V.	LONG LEG VERTICAL
LONG.	LONGITUDINAL
L.P.	LOW POINT
LTWT.	LIGHT WEIGHT
M.	MOVEMENT
MAT.	MATERIAL
MAX.	MAXIMUM
M.C.	MOVEMENT CONNECTION
MECH.	MECHANICAL
MEZZ,	MEZZANINE
MDL.	MIDDLE
MIN.	MINIMUM
MISC.	MISCELLANEOUS
MFR.	MANUFACTURER
MTL.	METAL
N.I.C.	NOT IN CONTRACT
NO. OR #	NUMBER
NOM.	NOMIAL
N.S.	NEAR SIDE
N.T.S.	NOT TO SCALE
O.C.	ON CENTER
O.D.	OUTSIDE DIAMETER
O.F.	OUTSIDE FACE
O.H.	OPPOSITE HAND
OPN.	OPENING
OPP.	OPPOSITE
PAR.	PARALLEL
PART.	PARTITION
P.C.C.	PRE-CAST CONCRETE
P.C.F.	POUNDS PER CUBIC FOOT
P.C.I.	POUNDS PER CUBIC INCH
PERP.	PERPENDICULAR
PL	PLATE
P.S.F.	POUNDS PER SQUARE FOOT
P.S.I.	POUNDS PER SQUARE INCH
PT.	POINT
RAD.	RADIUS
REINF.	REINFORCEMENT
REQ.	REQUIRE
REQ'D	REQUIRED
SCHED.	SCHEDULE
SECT.	SECTION
S.F.	SQUARE FOOT (FEET)
SHT.	SHEET
SIM.	SIMILAR
SPEC.	SPECIFICATION
SPEC'D	SPECIFIED
STL.	STEEL
STD.	STANDARD
STIFF.	STIFFENER
STIR.	STIRRUP
STRUCT.	STRUCTURE
SUB-CONT.	SUB-CONTRACTOR
SUPT.	SUPPORT
SYM.	SYMMETRICAL
T/	TOP
T&B	TOP AND BOTTOM
TEMP.	TEMPERATURE
TEN.	TENSION
THK.	THICK
TYP.	TYPICAL
U.N.	UNLESS NOTED
U.N.O.	UNLESS NOTED OTHERWISE
V	SHEAR
VERT.	VERTICAL
W/	WITH
W/O	WITHOUT
WF	WIDE FLANGE
W XxXX	WIDE FLANGE SECTION
W.L.	WIND LOAD
W.P.	WORK POINT
WPRF.	WATER PROOFING
W.S.	WATER STOP
W.W.F.	WELDED WIRE FABRIC

FINAL SUBMISSION

Scale: 3/4" = 1'-0"

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Revisions:		Date

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Drawing Title: STRUCTURAL GENERAL NOTES - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

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Drawn: D.R.W.

Project Number: 11159.00

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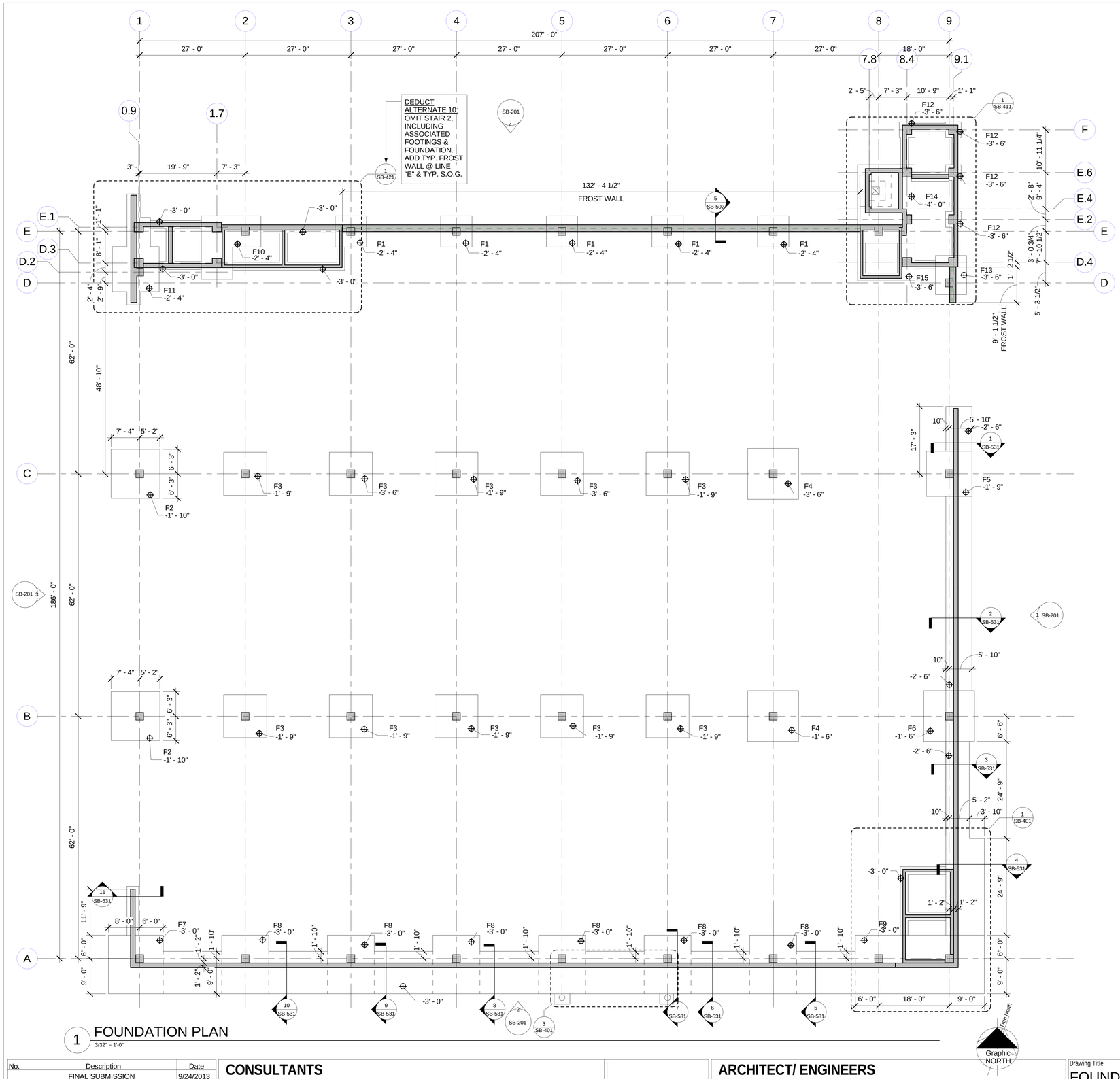
Office of Construction and Facilities Management

Department of Veterans Affairs



1 FOUNDATION PLAN
3/32" = 1'-0"

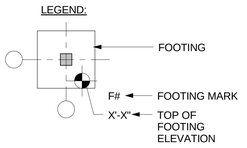
INDIVIDUAL SPREAD FOOTING SCHEDULE

FOOTING MARK	FOOTING SIZE			FOOTING REINFORCEMENT		COLUMN OR PILASTER DOWELS	REMARKS
	LENGHT (FEET)	WIDTH (FEET)	THICKNESS (INCHES)	LONG BARS	SHORT BARS		
F1	8'-0"	8'-0"	20"	6-#7	6-#7	4-#8	
F2	12'-6"	12'-6"	26"	11-#7	11-#7	4-#8	
F3	11'-0"	11'-0"	27"	9-#8	9-#8	4-#8	
F4	13'-0"	13'-0"	30"	11-#8	11-#8	4-#8	
F5	11'-8"	11'-6"	27"	9-#8	9-#8	4-#8	
F6	13'-0"	13'-0"	30"	11-#8	11-#8	4-#8	
F7	15'-0"	14'-0"	30"	13-#8	13-#8	4-#8	
F8	15'-0"	12'-0"	30"	12-#7	15-#7	4-#8	
F9	33'-0"	15'-0"	30"	12-#7	30-#7	4-#8	
F10			20"				SEE 1/SB-421
F11			20"				SEE 1/SB-421
F12	4'-0"	4'-0"	12"	5-#4	5-#4	8-#7	SEE 6/SB-511
F13	8'-0"	10'-0"	24"	10-#6	12-#6	4-#8	
F14	14'-8"	20'-0 3/4"	24"	#6 @ 12" T&B	#6 @ 12" T&B		
F15	4'-6"	9'-8"	12"	6-#5	10-#5	8-#7	6/SB-511, SIM.

NOTES:

1. SEE PLAN FOR FOOTING LOCATIONS.
2. FOOTINGS ARE CENTERED ON COLUMN LINES, U.N.O.
3. SEE COLUMN SCHEDULE FOR COLUMN SIZES.
4. SEE COLUMN SCHEDULE FOR ANCHOR BOLT REQUIREMENTS.
5. SEE ARCH. FOR THERMAL AND MOISTURE REQUIRMENTS.
6. DEDUCT ALTERNATE 8: OMIT EAST CANOPY. ADD SIGNAGE FRAME @ EAST DRIVE, SEE DET. 3 & 4/SB-401, SIM. SEE ARCH. DWGS. FOR LOCATION
7. DEDUCT ALTERNATE 11: OMIT WEST PARKING LOT, ADD TYP. FROST WALL AT LINE "1" E.O.S., SEE DET. 5/SB-502.

LEGEND:



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Revisions:		Date

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Drawing Title: FOUNDATION PLAN

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:14 AM

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Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: **SB-100**

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DEDUCT ALTERNATE 10:
OMIT STAIR 2, INCLUDING ASSOCIATED FOOTINGS & FOUNDATION, ADD TYP. FROST WALL @ LINE "E" & TYP. S.O.G.

DEDUCT ALTERNATE 11:
OMIT WEST PARKING LOT, ADD TYP. FROST WALL @ LINE "1" E.O.S., SEE DET. 5/SB-502

SHEET NOTES

1. SOIL SUPPORTED SLAB.

1.1 SLAB THICKNESS VARIES, SEE PLAN.

1.2 PROOF ROLL SUB-GRADE/STRUCTURAL FILL WITH FULLY LOADED TANDEM AXLE DUMP TRUCK.

1.3 ALL SOIL SUPPORTED SLABS SHALL BE REINFORCED WITH 4LBS./CU.YD. OF STRUCTURAL FIBER (SEE SPEC.) ON MIN. 6" THICK FREE DRAINING COMPACTED GRANULAR BASE.

1.4 SEE ARCH. DWGS. FOR VAPOR/MOISTURE BARRIER AND INSULATION REQUIREMENTS AT SPECIFIC LOCATIONS.

1.5 SEE ARCH. DWGS. FOR ADDITIONAL SLAB ELEVATIONS, CURBS, CANTS, AND WASHES.

1.6 PROVIDE CONTROL JOINTS IN ENCLOSED ROOMS AND STAIR AND ELEVATOR TOWERS SLAB-ON-GRADE PER DET. 1/SB-501.

2. DEDUCT ALTERNATE 8: OMIT EAST CANOPY. ADD SIGNAGE FRAME @ EAST DRIVE, SEE DET. 3 & 4/SB-401, SIM. SEE ARCH. DWGS. FOR LOCATION.

1 LEVEL 1 SLAB-ON-GRADE PLAN
3/32" = 1'-0"

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Drawing Title: LEVEL 1 SLAB-ON-GRADE PLAN
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Drawn: D.R.W.
Project Number: 11159.00
Building Number:
Drawing Number: SB-101

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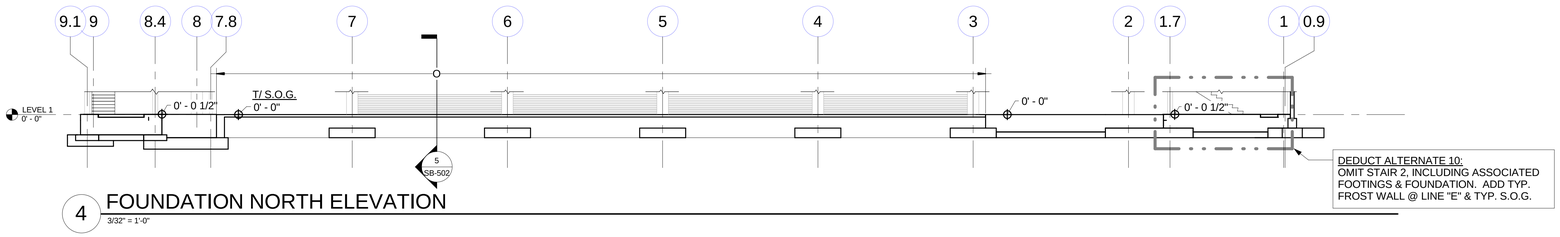
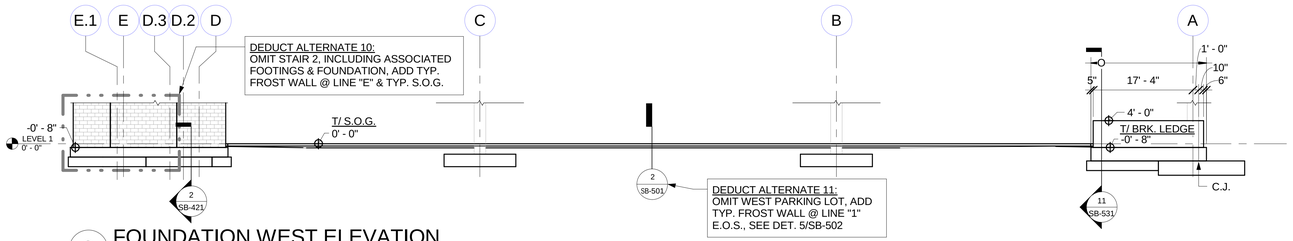
NOTES:

1. ELEVATIONS INDICATED THIS SHEET ARE TOP OF REINF. C.I.P. CONC. WALL, U.N.O.
2. SEE SB-100 FOR FOOTING TYPES AND ELEVATIONS.
3. SEE ARCH. FOR THERMAL AND MOISTURE PROTECTION REQUIREMENTS.
4. VERTICAL CONTROL JOINTS INDICATED THIS SHEET ARE ON EACH FACE OF RETAINING WALLS.



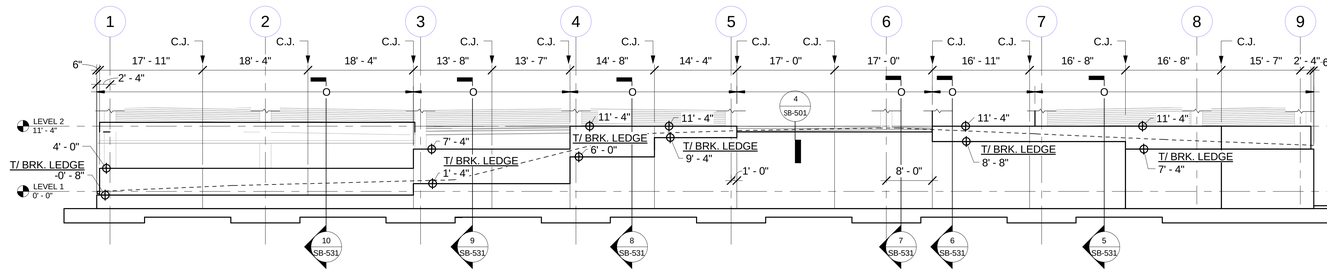
4 FOUNDATION NORTH ELEVATION

3/32" = 1'-0"



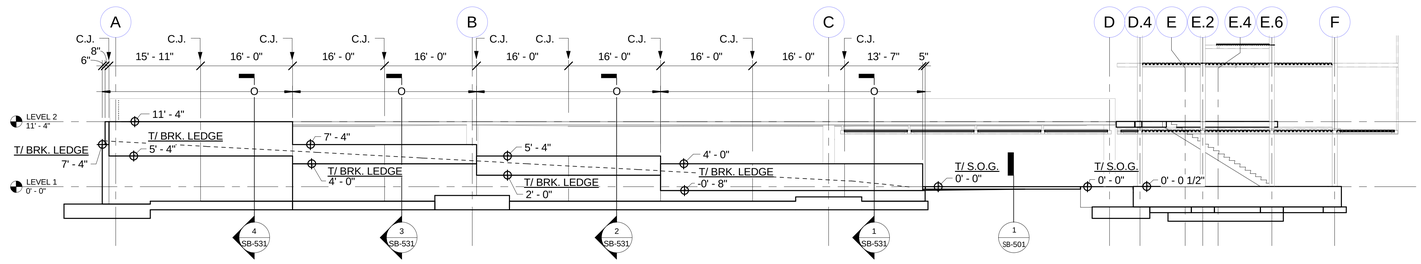
3 FOUNDATION WEST ELEVATION

3/32" = 1'-0"



2 FOUNDATION SOUTH ELEVATION

3/32" = 1'-0"



1 FOUNDATION EAST ELEVATION

3/32" = 1'-0"

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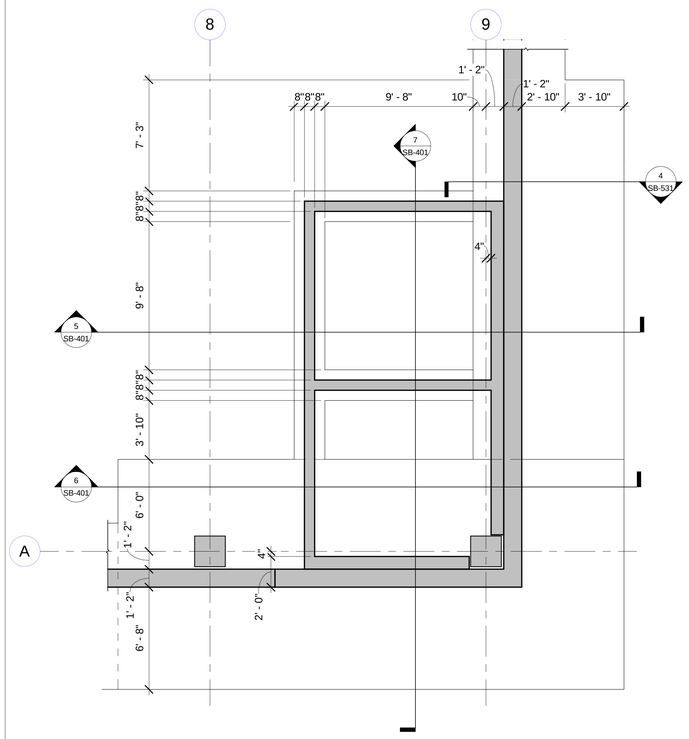
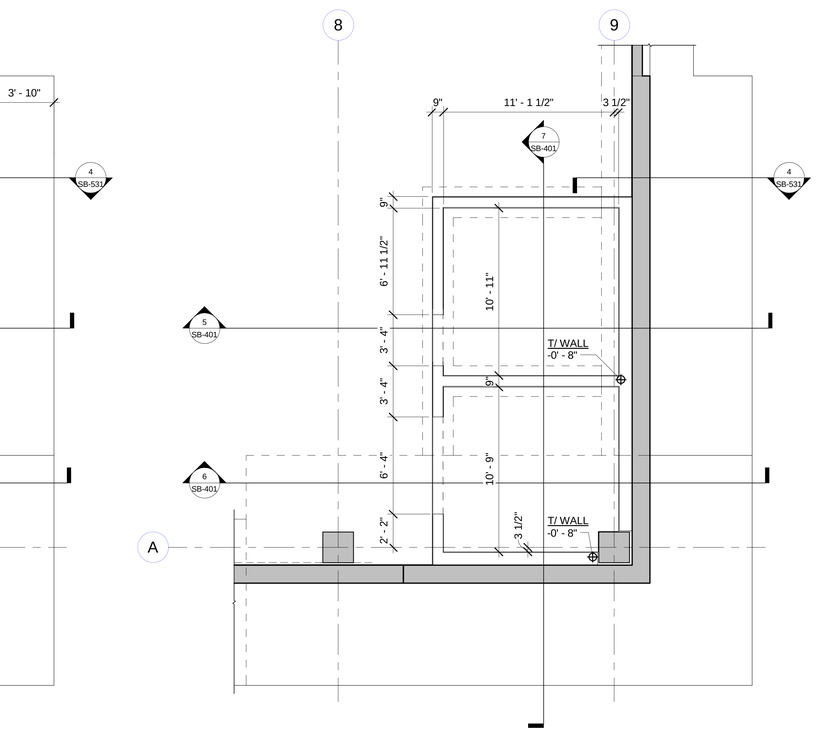
Office of Construction and Facilities Management

Department of Veterans Affairs



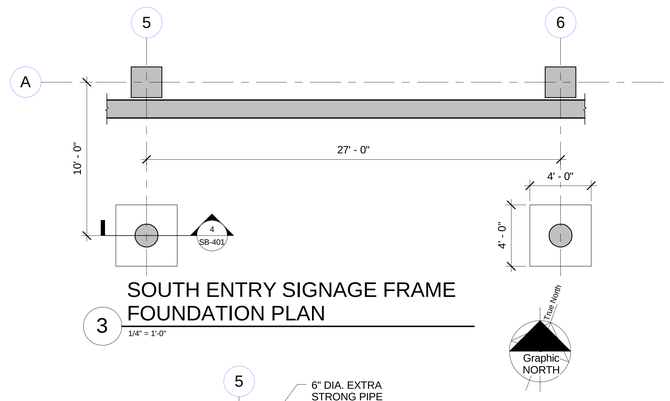
1 IT AND STORAGE ROOMS FOUNDATION PLAN

1/4" = 1'-0"



2 IT AND STORAGE ROOMS LEVEL 1 SLAB-ON-GRADE PLAN

1/4" = 1'-0"

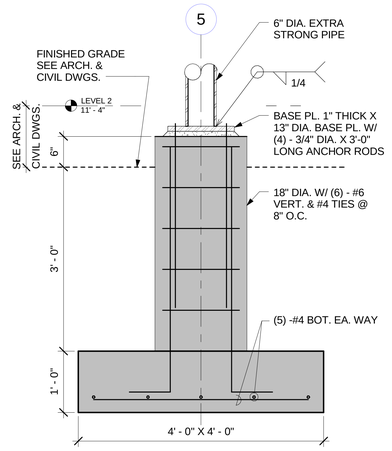


3 SOUTH ENTRY SIGNAGE FRAME FOUNDATION PLAN

1/4" = 1'-0"

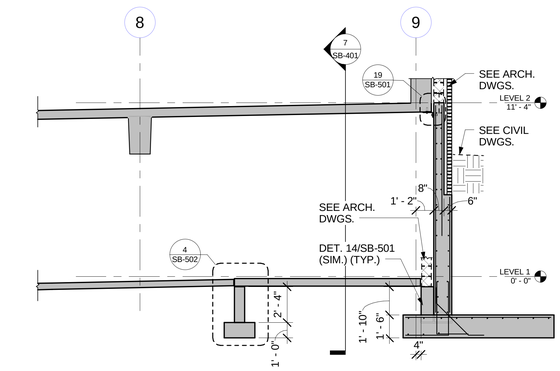
NOTES:

1. SEE SB-100 FOR FOUNDATION ELEVATIONS NOT SPECIFIED THIS SHEET.
2. SEE ARCH. DWGS. FOR FINISHED SLAB ELEVATIONS.
3. SEE ARCH. FOR THERMAL AND MOISTURE PROTECTION REQUIREMENTS.



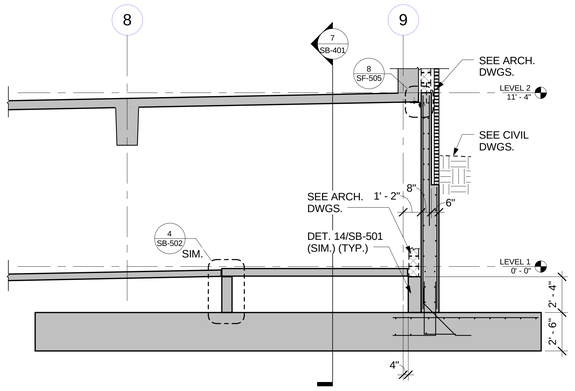
4 SOUTH ENTRY SIGNAGE FRAME FOUNDATION SECTION

1" = 1'-0"



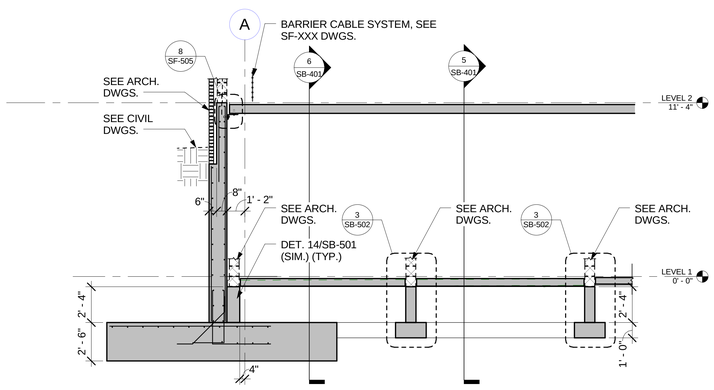
5 IT ROOM FOUNDATION SECTION

1/4" = 1'-0"



6 STORAGE ROOM FOUNDATION SECTION

1/4" = 1'-0"



7 STORAGE AND IT ROOMS FOUNDATION SECTION

1/4" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

Westlake Reed Leskosky

The Huntington Building
925 Euclid Avenue, Suite 1900
Cleveland, Ohio
44115-1407
216.522.1350

Drawing Title: IT AND STORAGE ROOMS FNDN. ENLARGED VIEWS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:17 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

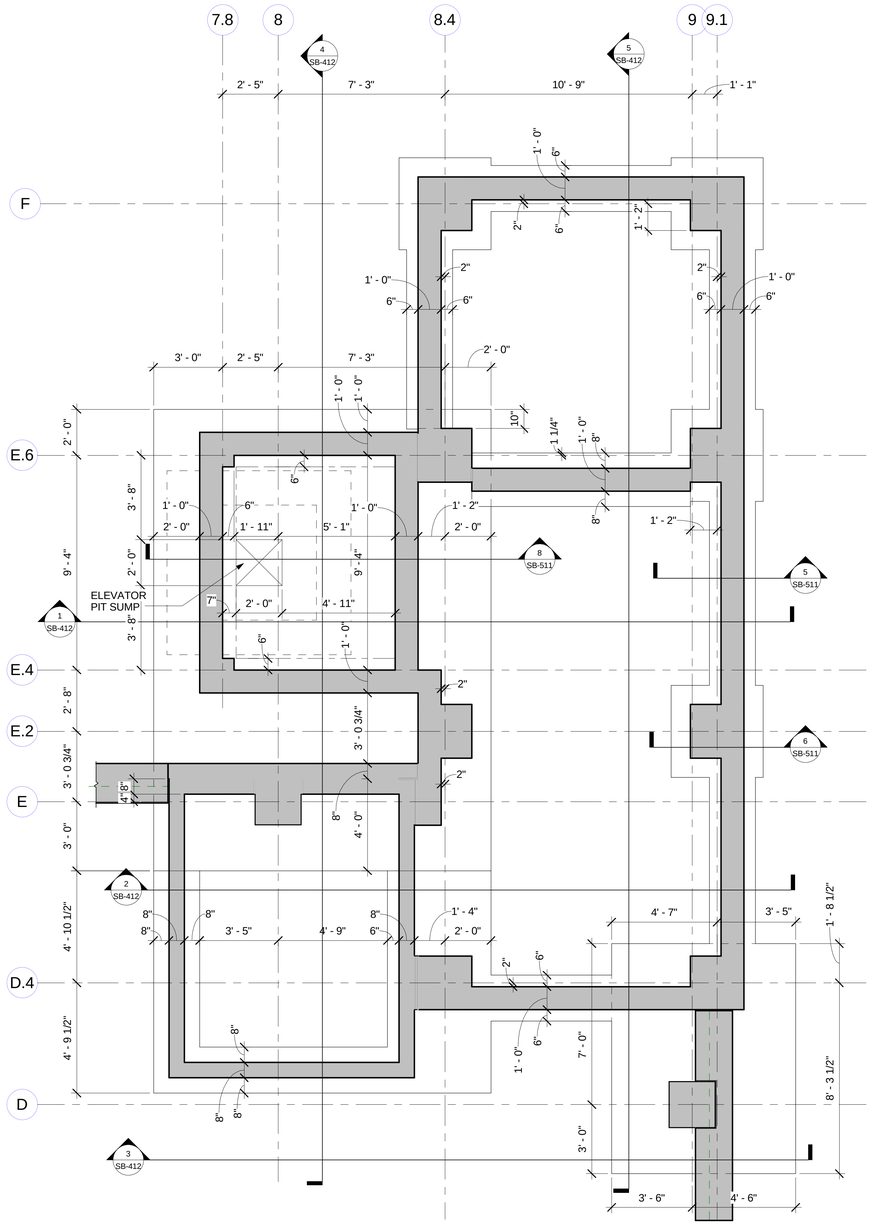
Drawing Number: **SB-401**

Office of Construction and Facilities Management

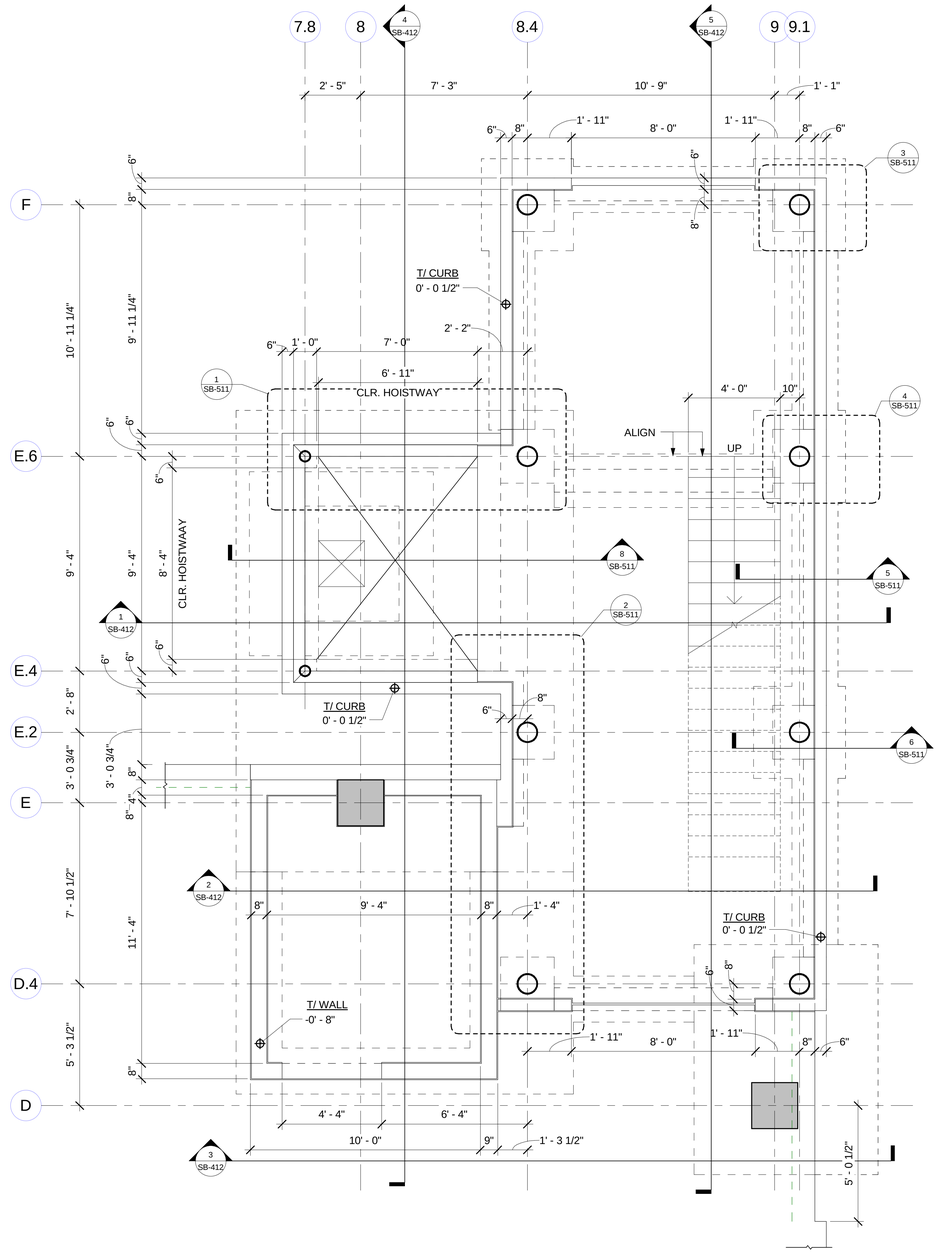
Department of Veterans Affairs

NOTES:

1. SEE SB-100 FOR FOUNDATION ELEVATIONS NOT SPECIFIED THIS SHEET.
2. SEE ARCH. DWGS. FOR FINISHED SLAB ELEVATIONS.
3. SEE ARCH. FOR THERMAL AND MOISTURE PROTECTION REQUIREMENTS.



1 ELEVATOR / STAIR 1 FOUNDATION PLAN
3/8" = 1'-0"



2 ELEVATOR / STAIR 1 LEVEl 1 SLAB-ON-GRADE PLAN
3/8" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

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216.522.1350

Drawing Title: ELEVATOR / STAIR 1 FDN. ENLARGED PLANS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:18 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: **SB-411**

Office of Construction and Facilities Management

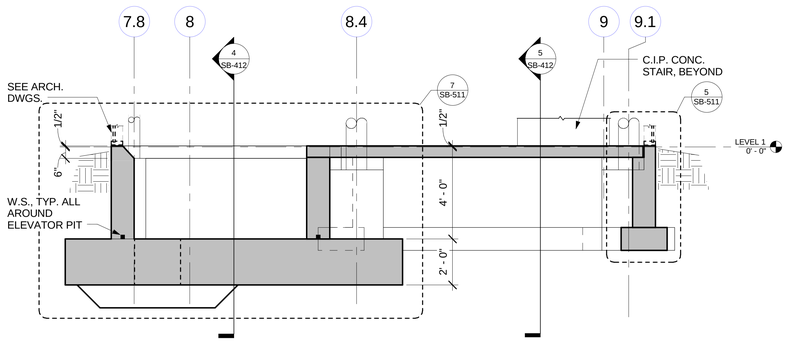
Department of Veterans Affairs

NOTES:

1. SEE SB-100 FOR FOUNDATION ELEVATIONS NOT SPECIFIED THIS SHEET.

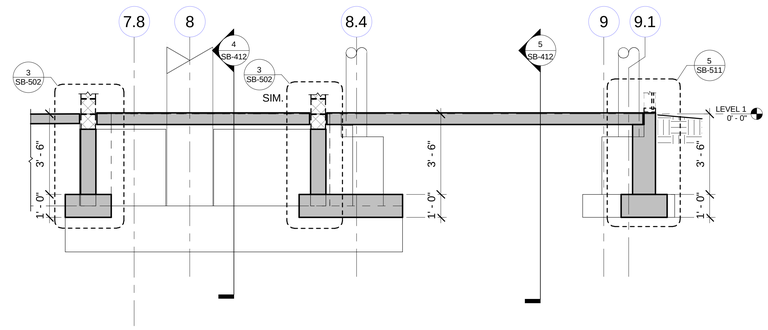
2. SEE ARCH. DWGS. FOR FINISHED SLAB ELEVATIONS.

3. SEE ARCH. FOR THERMAL AND MOISTURE PROTECTION REQUIREMENTS.



1 ELEVATOR PIT / STAIR 1 SECTION

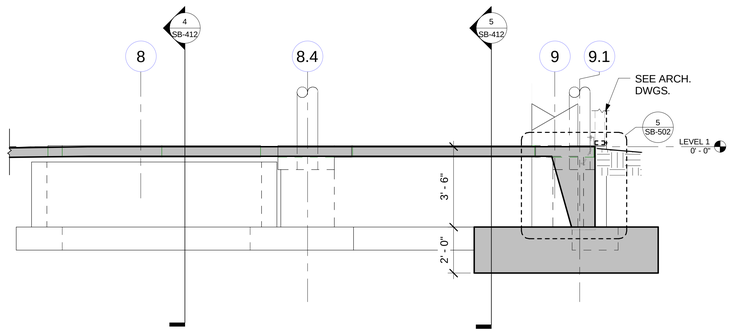
3/8" = 1'-0"



MACHINE ROOM / STAIR 1 FOUNDATION SECTION

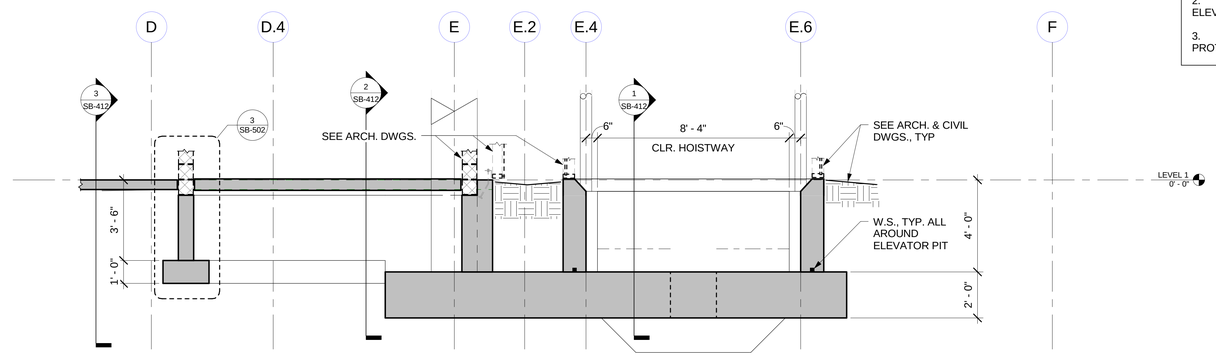
2

3/8" = 1'-0"



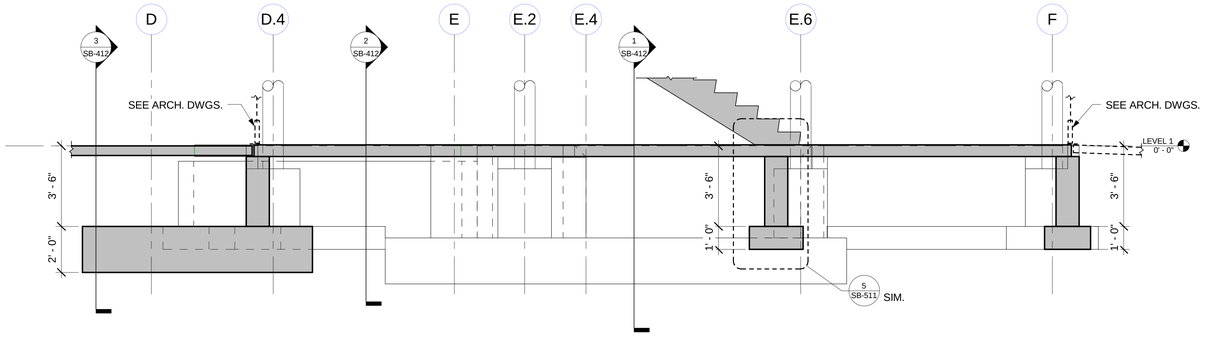
3 SLAB ON GRADE FOUNDATION SECTION

3/8" = 1'-0"



4 MACHINE ROOM / ELEVATOR PIT FOUNDATION SECTION

3/8" = 1'-0"



5 STAIR 1 FOUNDATION SECTION

3/8" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

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216.522.1350

Drawing Title: ELEVATOR / STAIR 1 FDN. ENLARGED SECTIONS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:19 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

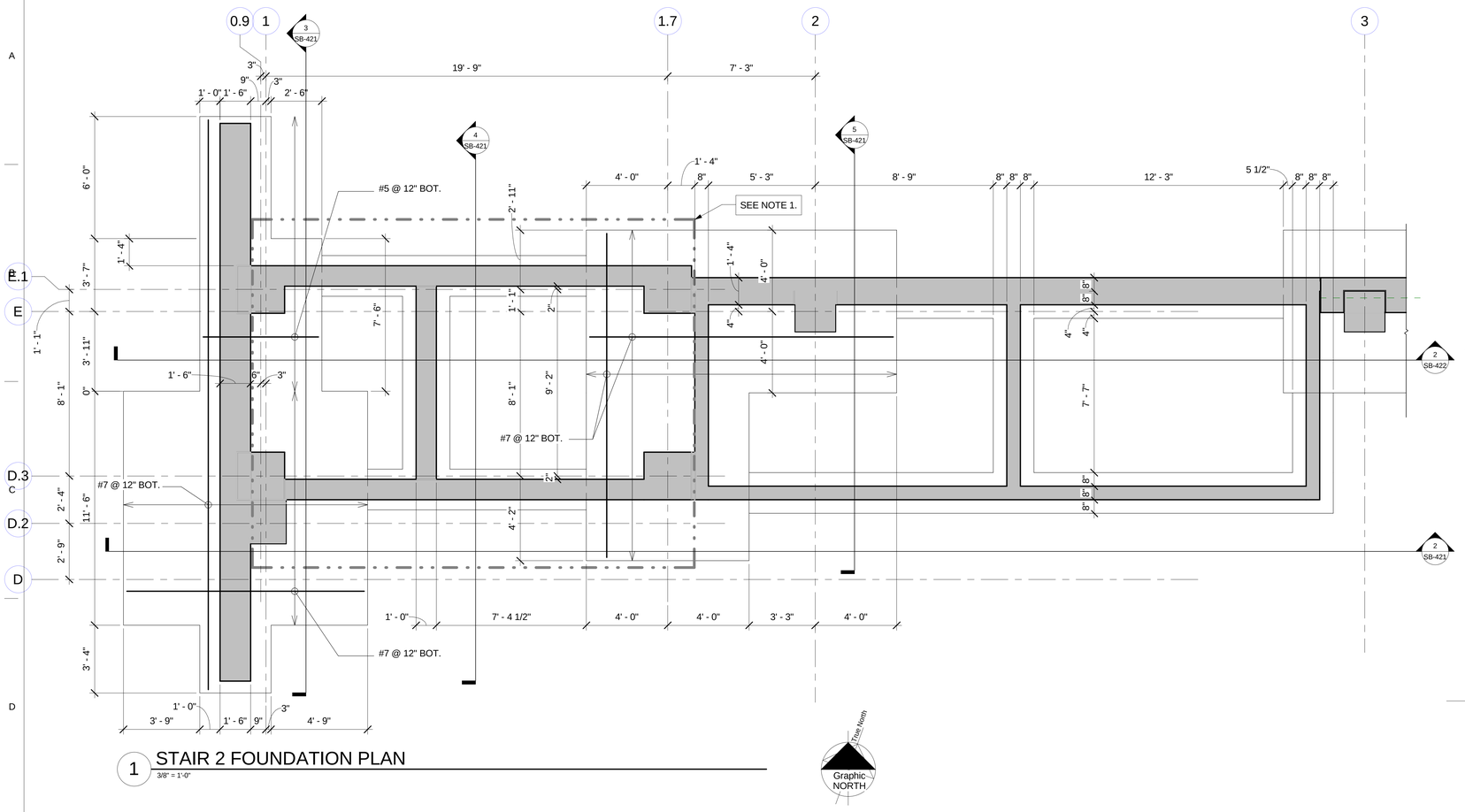
Drawing Number: SB-412

Office of Construction and Facilities Management

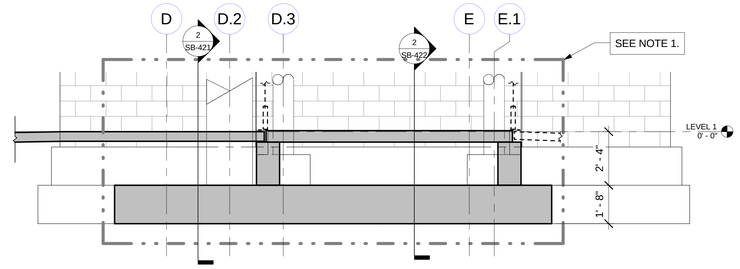
Department of Veterans Affairs

NOTES:

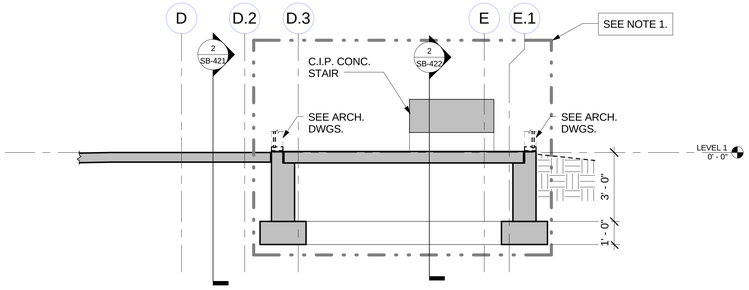
1. DEDUCT ALTERNATE 10: OMIT STAIR 2 & ASSOCIATED FOOTINGS & FOUNDATION. ADD TYP. FROST WALL @ LINE "E" & TYP. S.O.G.



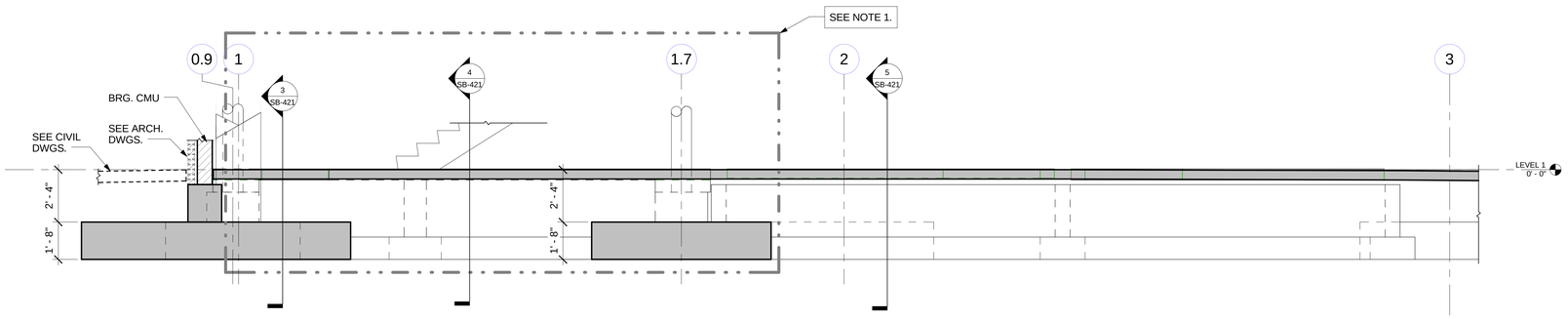
1 STAIR 2 FOUNDATION PLAN
3/8" = 1'-0"



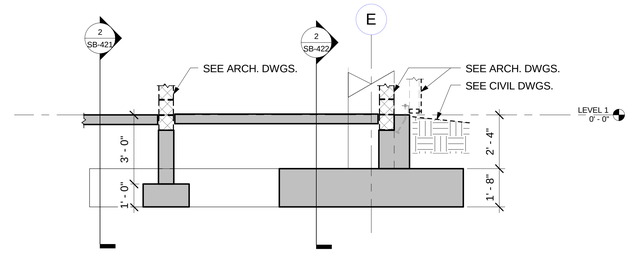
3 STAIR 2 FOUNDATION SECTION 2
3/8" = 1'-0"



4 STAIR 2 FOUNDATION SECTION 3
3/8" = 1'-0"



2 STAIR 2 FOUNDATION SECTION 1
3/8" = 1'-0"



5 ELECTRICAL ROOM FOUNDATION SECTION
3/8" = 1'-0"

FINAL SUBMISSION

Scale: 3/8" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

CONSULTANTS

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Drawing Title: STAIR 2 FOUNDATION ENLARGED VIEWS - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:20 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

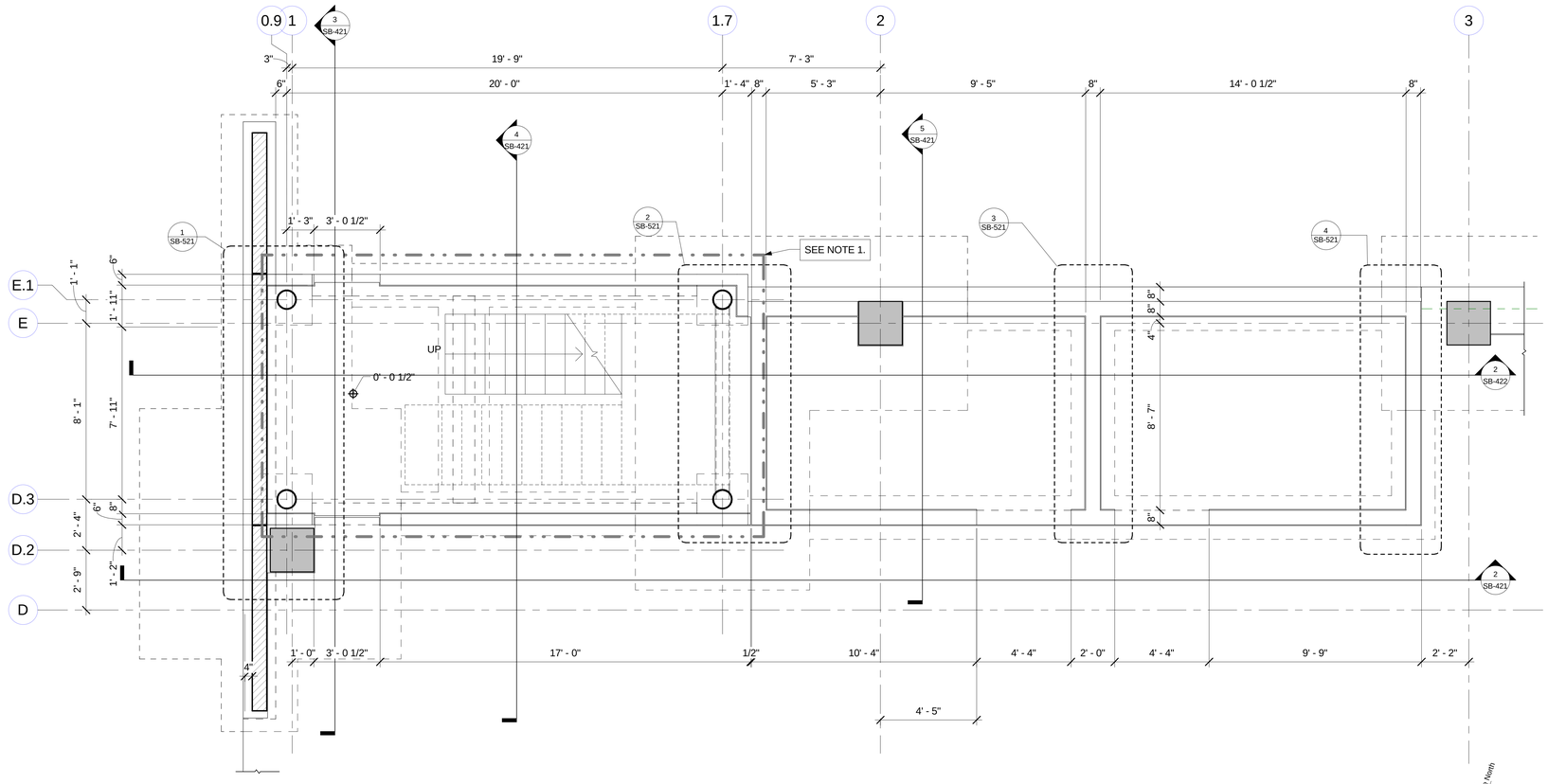
Drawing Number: SB-421

Office of Construction and Facilities Management

Department of Veterans Affairs

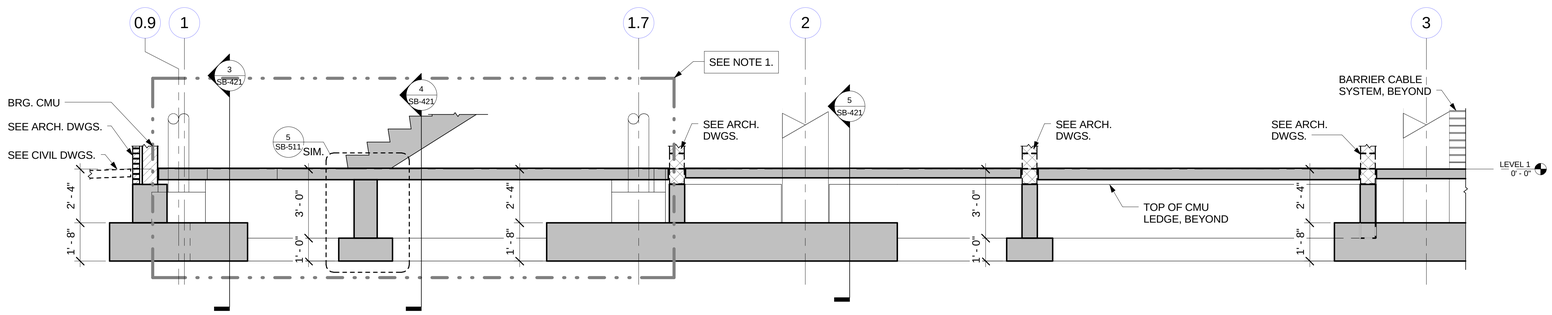
NOTES:

1. DEDUCT ALTERNATE 10: OMIT STAIR 2 & ASSOCIATED FOOTINGS & FOUNDATION. ADD TYP. FROST WALL @ LINE "E" & TYP. S.O.G.



1 STAIR 2 LEVEL 1 SLAB-ON-GRADE PLAN

3/8" = 1'-0"



2 STAIR 2 FOUNDATION SECTION 4

3/8" = 1'-0"

FINAL SUBMISSION

Scale: 3/8" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: STAIR 2 FOUNDATION ENLARGED VIEWS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:21 AM

Checked: B.I.

Drawn: D.R.W.

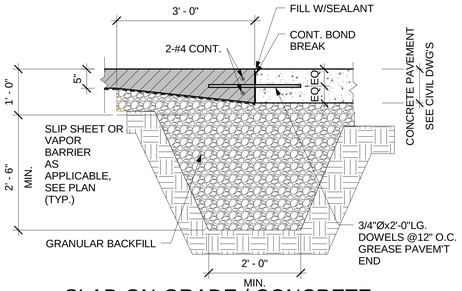
Project Number: 11159.00

Building Number:

Drawing Number: SB-422

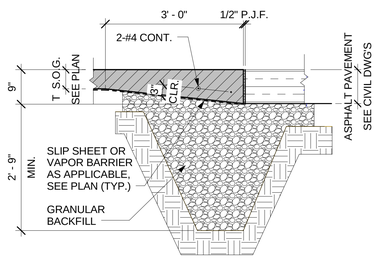
Office of Construction and Facilities Management

Department of Veterans Affairs



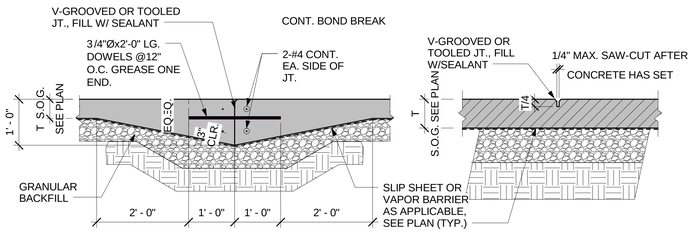
1 SLAB-ON-GRADE / CONCRETE PAVEMENT INTERFACE DETAIL

N.T.S.



2 SLAB-ON-GRADE/ASPHALT PAVEMENT INTERFACE DETAIL

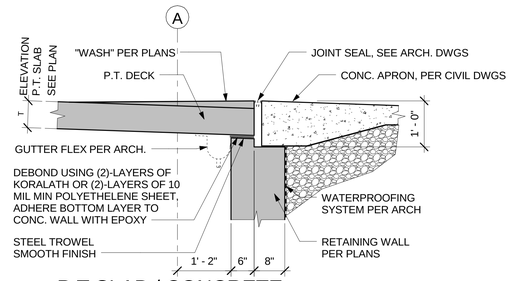
N.T.S.



NOTES:
CONSTRUCTION AND CONTROL JOINTS ARE INTERCHANGEABLE AT CONTRACTOR'S OPTION. JOINTS LOCATED AT COLUMN CENTERLINES ARE CONSIDERED OPTIMUM; HOWEVER, IT IS INTENDED THAT THE CONTRACTOR LAYOUT A PATTERN THAT WILL RESULT IN JOINTS AT 11'-0" MAXIMUM CENTER TO CENTER IN EACH DIRECTION INTENDED TO MINIMIZE CRACKING DUE TO CONCRETE DRYING SHRINKAGE AND THERMAL EFFECTS. DO NOT LOCATE CONSTRUCTION AND/OR CONTROL JOINTS BELOW MASONRY WALLS.

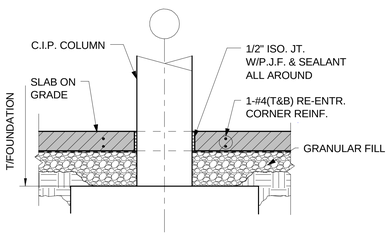
3 SLAB-ON-GRADE JOINT DETAILS

N.T.S.



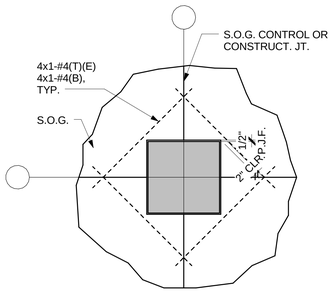
4 P.T.SLAB / CONCRETE PAVEMENT INTERFACE DETAIL

N.T.S.



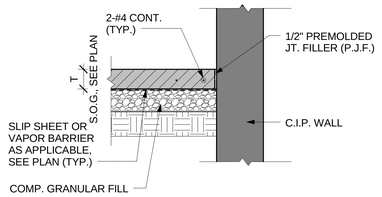
5 TYP. COLUMN-SLAB CONNECTION

N.T.S.



6 TYPICAL INTERIOR COLUMN ISOLATION JOINT DETAIL AT S.O.G.

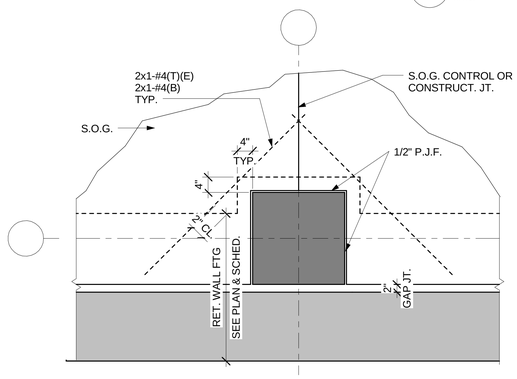
N.T.S.



NOTE:
PROVIDE CONTINUOUS SEALANT ALONG ALL SLAB TO WALL JOINTS.

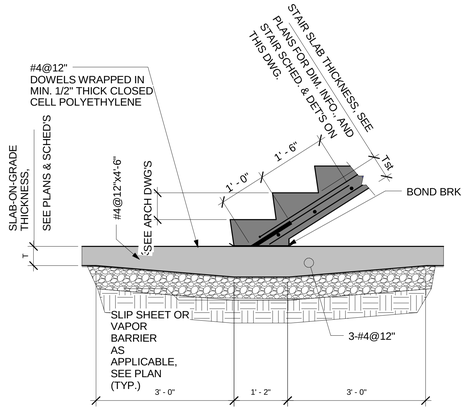
7 TYP. SECTION-S.O.G. AT WALL

N.T.S.



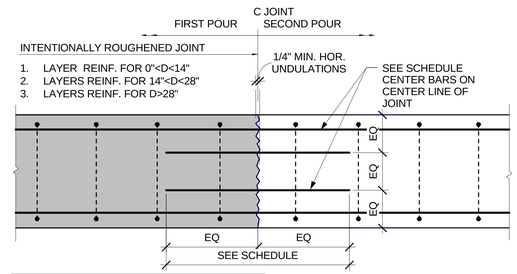
8 TYPICAL EXT. COLUMN DETAIL AT S.O.G.

N.T.S.



9 TYP. STAIR-TO-S.O.G. CONN. DETAIL FOR INTEGRAL STAIRS

N.T.S.

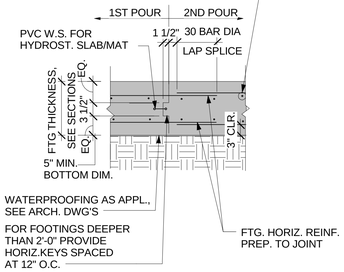


BEAM CONSTRUCTION JOINT REBAR SCHEDULE	
BEAM WIDTH W, INCHES, MAX.	JOINT REBAR SIZE, LENGTH, AND NUMBER PER LAYER
0" TO 14"	4 - #4 x 3'-0"
15" TO 24"	6 - #5 x 3'-6"
25" TO 34"	8 - #5 x 3'-6"
35" TO 48"	9 - #6 x 4'-0"
49" TO 60"	12 - #7 x 4'-6"
61" TO 72"	16 - #7 x 4'-6"
73" TO 90"	16 - #8 x 5'-0"

CONSTRUCTION JOINT NOTES :
1. CONSTRUCTION JOINTS SHALL BE DONE IN ACCORDANCE WITH ACI 318 SECTION 6.4.
2. LOCATION OF CONSTRUCTION JOINTS SHALL BE APPROVED BY THE ARCHITECT AND ENGINEER.
3. JOINT REINFORCEMENT DESIGNED IN ACCORDANCE WITH ACI 318 SECTION 11.7
4. BEAM MARK CALLED OUT ON PLAN AND DIMENSIONS SHOWN IN SCHEDULE.
5. SLAB DIMENSIONS SHOWN ON DETAILS AND PLAN.
6. JOINTS IN BEAM OR SLAB OF DIMENSIONS NOT COVERED IN THIS SCHEDULE SHALL BE DESIGNED SEPARATELY FROM THE LOCATION INFORMATION SUPPLIED BY THE CONTRACTOR.

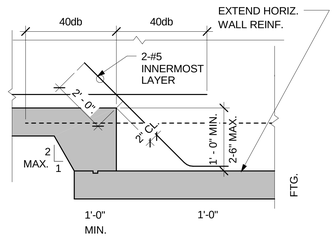
10 TYP. GRADE BEAM OR WALL FOOTING CONSTR. JT DETAIL

N.T.S.



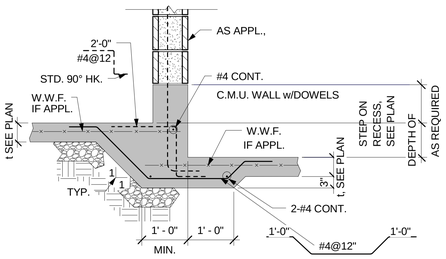
11 CONT. FOOTING OR MAT CONSTRUCTION JOINT TYP. DETAIL

N.T.S.



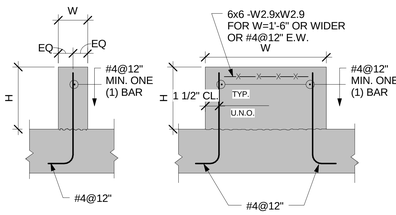
12 TYP. STEPPED WALL FOOTING DETAIL

N.T.S.



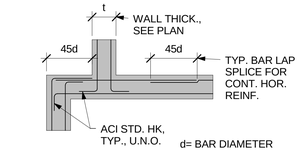
13 TYP. RECESS IN SLAB-ON-GRADE DETAIL

N.T.S.



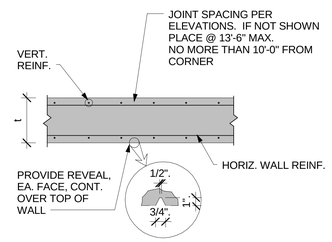
14 CONCRETE CURB DETAIL

N.T.S.



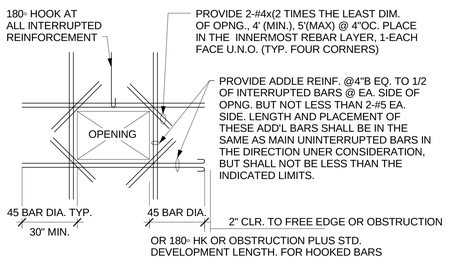
15 BAR SPLICES IN WALL DOUBLE LAYER TYP.

N.T.S.



16 WALL CONTROL JT. DETAIL

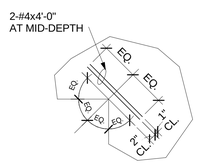
N.T.S.



NOTE: THIS DETAIL APPLIES TO SLABS AND WALLS, REINFORCEMENT AROUND OPENINGS FOR WHICH

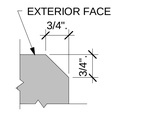
17 MIN. REINFORCEMENT AT SLAB OR WALL OPENINGS

N.T.S.



18 RE-ENTRANT CORNER BARS TYP. DETAIL

N.T.S.



NOTE: PROVIDE CHAMFER THUS @ ALL EXTERIOR CORNERS, TYP. U.N.O.

19 CHAMFER DETAIL

N.T.S.

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS
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216.522.1350

Drawing Title: TYPICAL FOUNDATION DETAILS - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:23 AM

Checked: B.I.

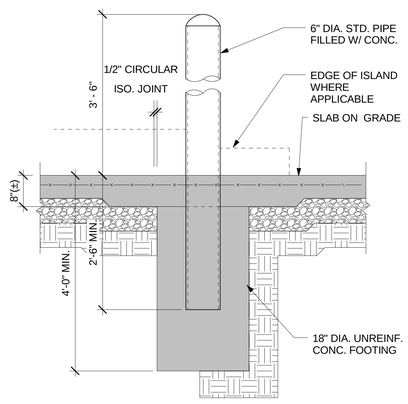
Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: **SB-501**

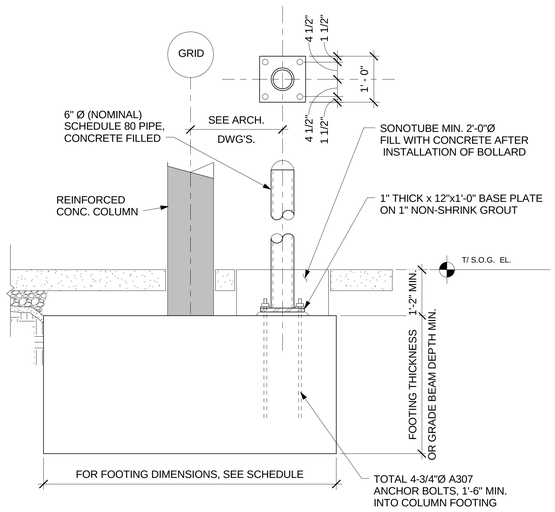
Office of Construction and Facilities Management
Department of Veterans Affairs



NOTE: PROVIDE CONTINUOUS SEALANT ALONG SLAB TO BOLLARD JOINT.

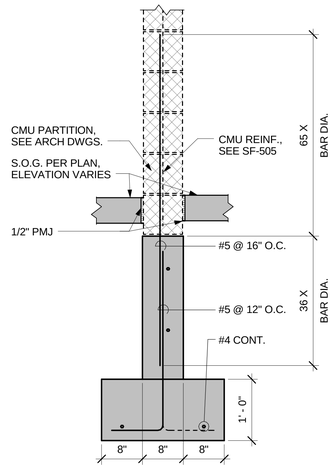
1 PIPE-BOLLARD TYP. DETAIL IN SLAB-ON-GRADE OR PAVEMENT

N.T.S.



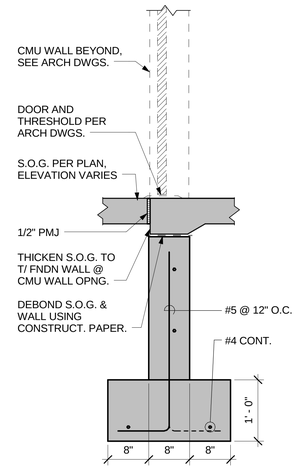
2 PIPE BOLLARD AT FOUNDATION TYP. DETAIL

N.T.S.



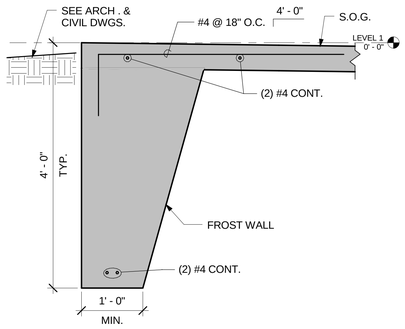
3 TYPICAL FOUNDATION WALL FOR CMU WALL

1" = 1'-0"



4 TYPICAL FOUNDATION WALL FOR CMU WALL OPENNING

1" = 1'-0"



5 TYPICAL FROST WALL DETAIL

1" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: TYPICAL FOUNDATION DETAILS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:24 AM

Checked: B.I.

Drawn: Author

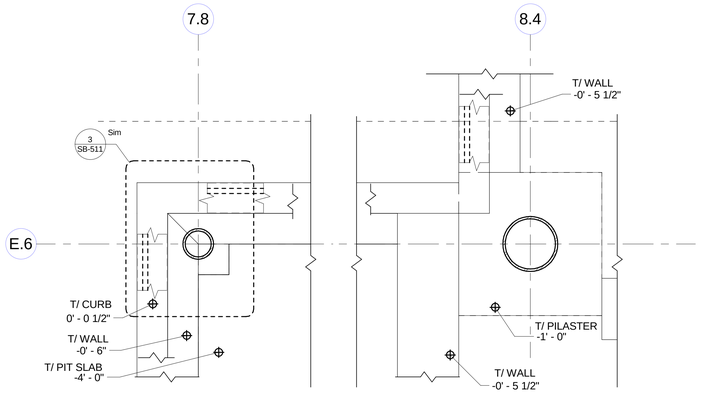
Project Number: 11159.00

Building Number:

Drawing Number: **SB-502**

Office of Construction and Facilities Management

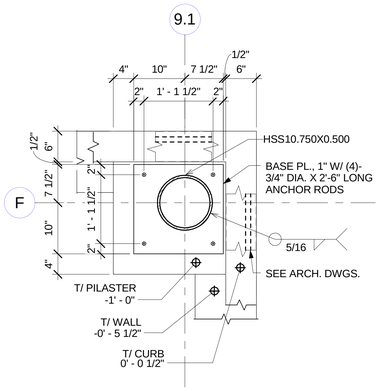
Department of Veterans Affairs



1 ELEVATOR / STAIR 1 FOUNDATION PLAN DETAIL

1" = 1'-0"

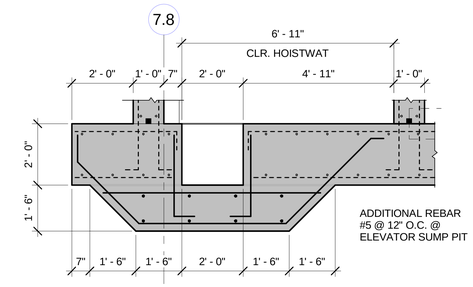
NOTE:
S.O.G. OMITTED
FOR CLARITY



3 STAIR 1 PILASTER AT CORNER PLAN DETAIL

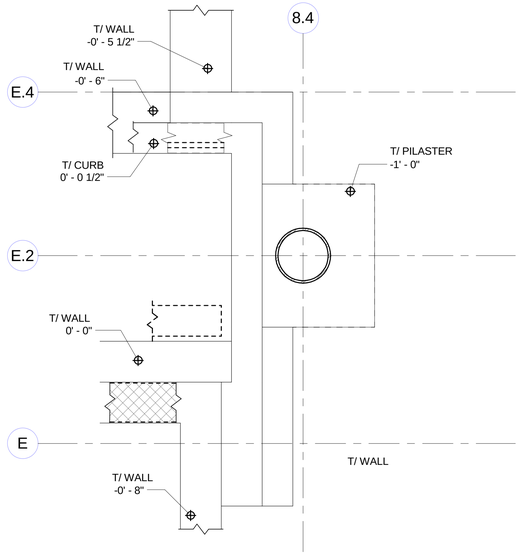
1" = 1'-0"

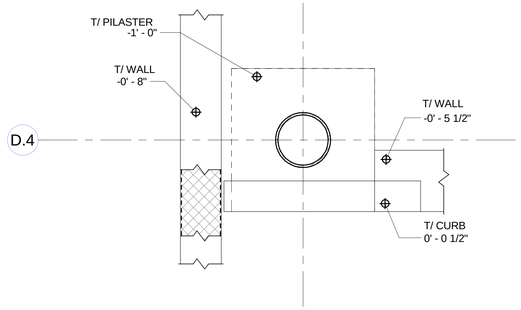
NOTE:
S.O.G. OMITTED
FOR CLARITY



8 ELEVATOR PIT SUMP SECTION

1/2" = 1'-0"

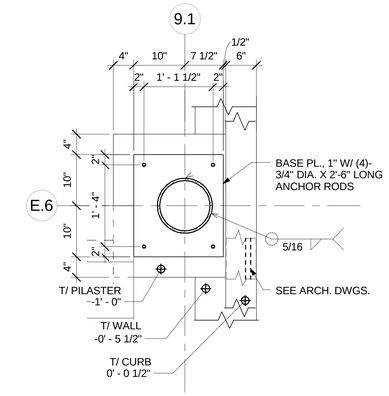




2 ELEVATOR / STAIR 1 / MACHINE ROOM FOUNDATION PLAN DETAIL

1" = 1'-0"

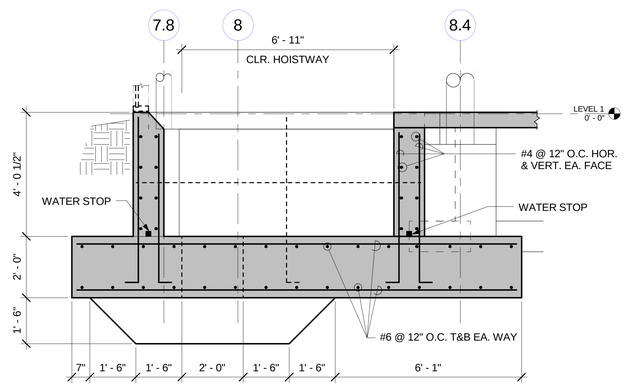
NOTE:
S.O.G. OMITTED
FOR CLARITY



4 STAIR 1 PILASTER AT WALL PLAN DETAIL

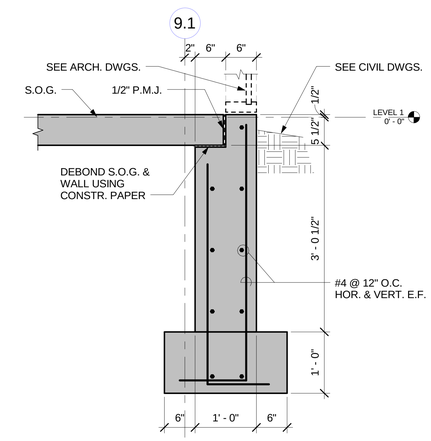
1" = 1'-0"

NOTE:
S.O.G. OMITTED
FOR CLARITY



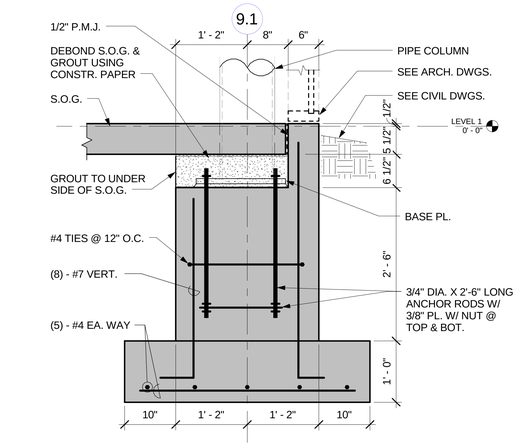
7 ELEVATOR PIT SECTION

1/2" = 1'-0"



5 STAIR 1 FOUNDATION WALL SECTION

1" = 1'-0"



6 STAIR 1 PILASTER SECTION

1" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: ELEVATOR / STAIR 1 FOUNDATION DETAILS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:25 AM

Checked: B.I.

Drawn: D.R.W.

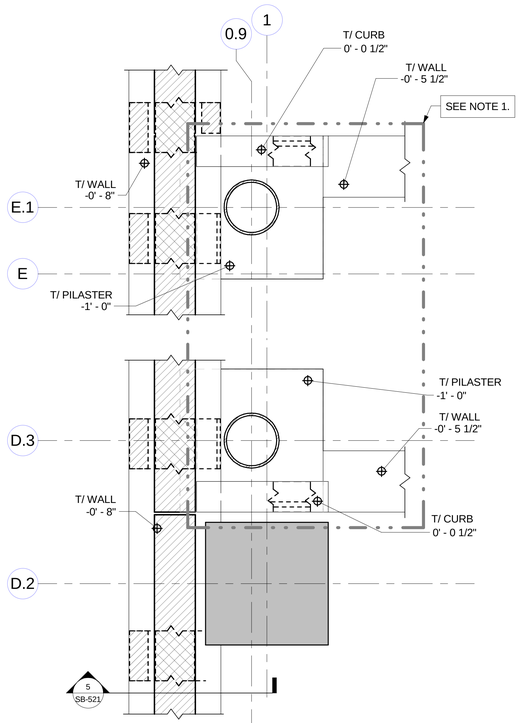
Project Number: 11159.00

Building Number:

Drawing Number: **SB-511**

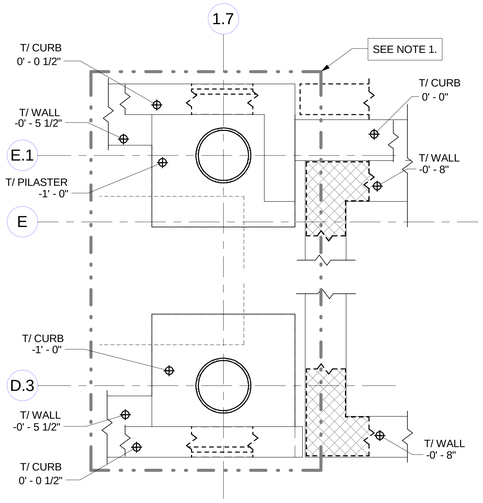
Office of Construction and Facilities Management

Department of Veterans Affairs



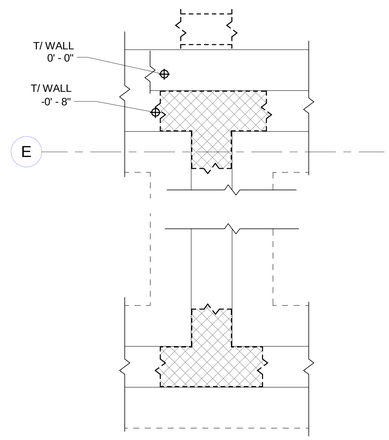
STAIR 2 WEST WALL FOUNDATION PLAN DETAIL

1 — 1" = 1'-0"



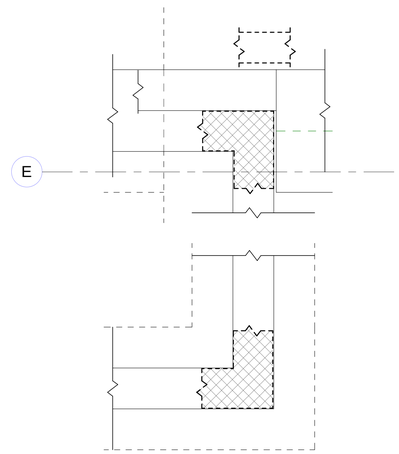
STAIR / ELECTRICAL ROOM FOUNDATIONPLAN DETAIL

2 — 1" = 1'-0"



ELECT. RM. / EMERG. ELECT. RM. FOUNDATION PLAN DETAIL

3 — 1" = 1'-0"

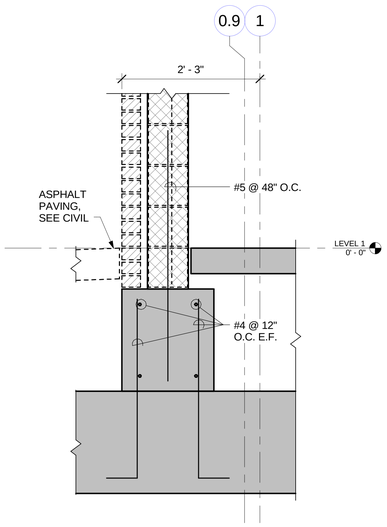


EMERGENCY ELECT. RM FOUNDATION PLAN DETAIL

4 — 1" = 1'-0"

NOTES:

1. DEDUCT ALTERNATE 10: OMIT STAIR 2 & ASSOCIATED FOOTINGS & FOUNDATION. ADD TYP. FROST WALL @ LINE "E" & TYP. S.O.G.



STAIR 2 WEST WALL FOUNDATION SECTION

5 — 1" = 1'-0"

FINAL SUBMISSION

Scale: 1" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: STAIR 2 FOUNDATION DETAILS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:26 AM

Checked: B.I.

Drawn: D.R.W.

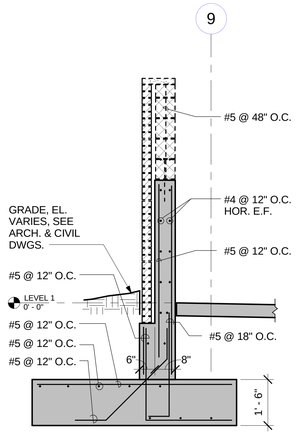
Project Number: 11159.00

Building Number:

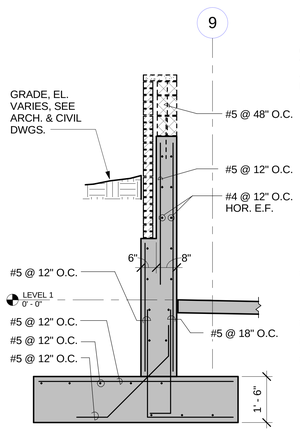
Drawing Number: **SB-521**

Office of Construction and Facilities Management

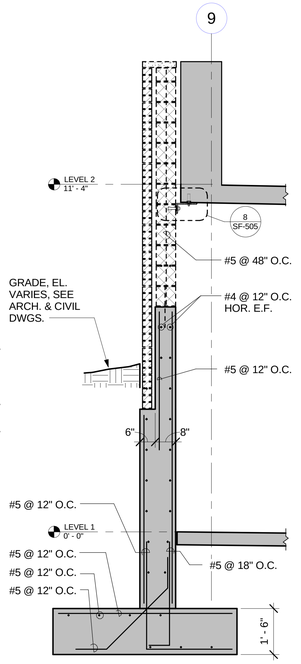
Department of Veterans Affairs



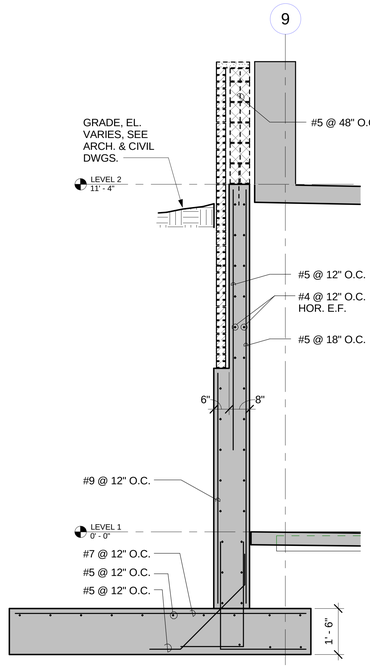
1 WALL SECTION - 1
1/2" = 1'-0"



2 WALL SECTION - 2
1/2" = 1'-0"



3 WALL SECTION - 3
1/2" = 1'-0"



4 WALL SECTION - 4
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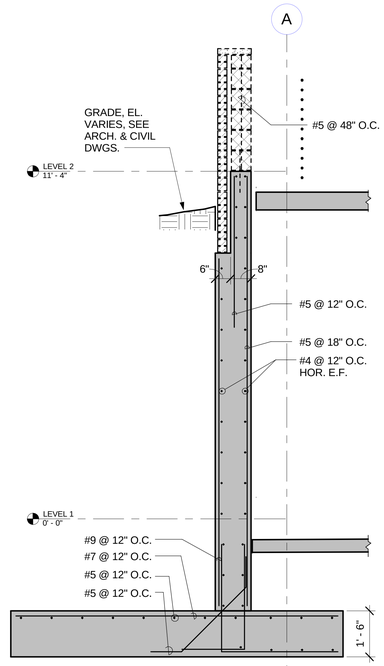

5 WALL SECTION - 5
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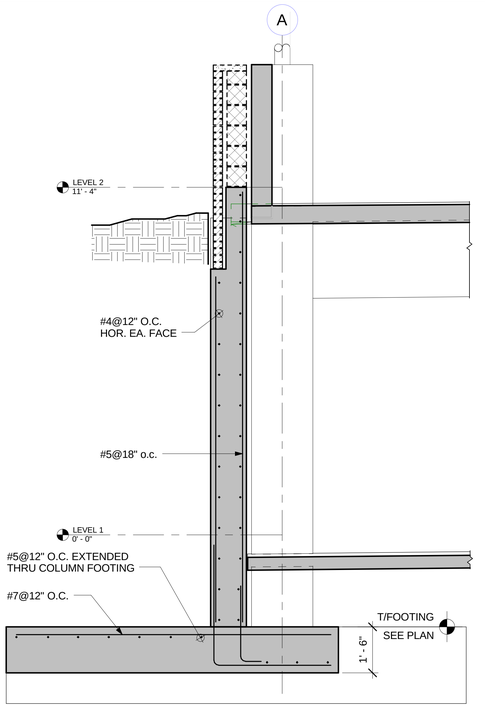
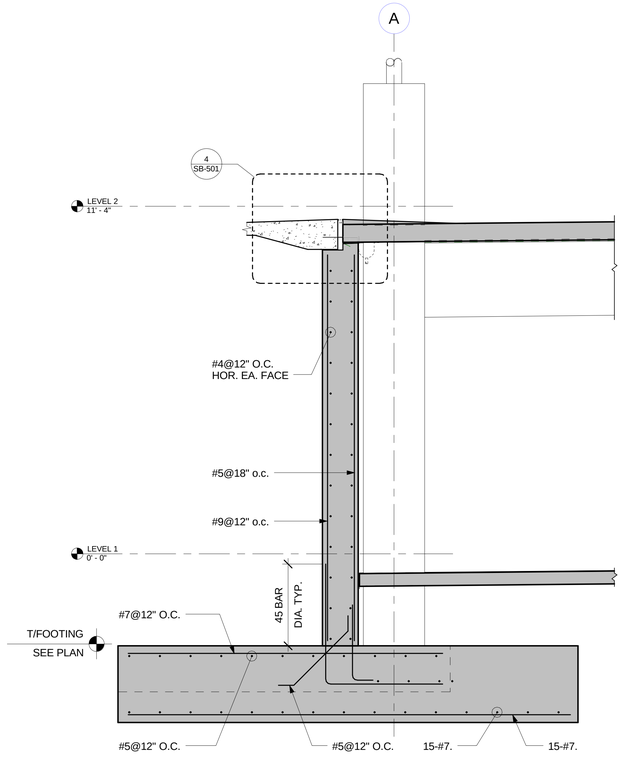


6 WALL SECTION - 6
1/2" = 1'-0"



7 WALL SECTION - 7
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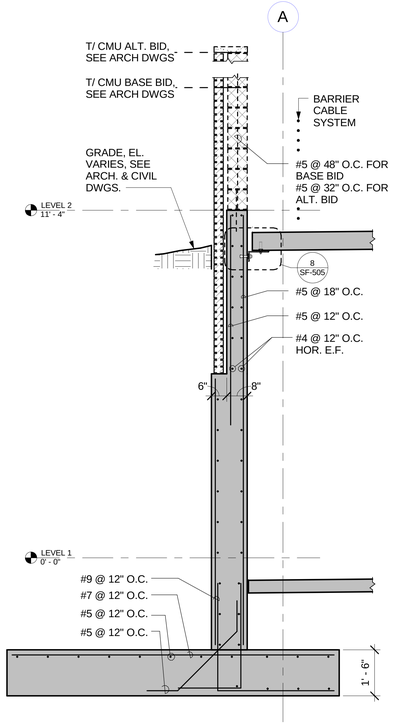
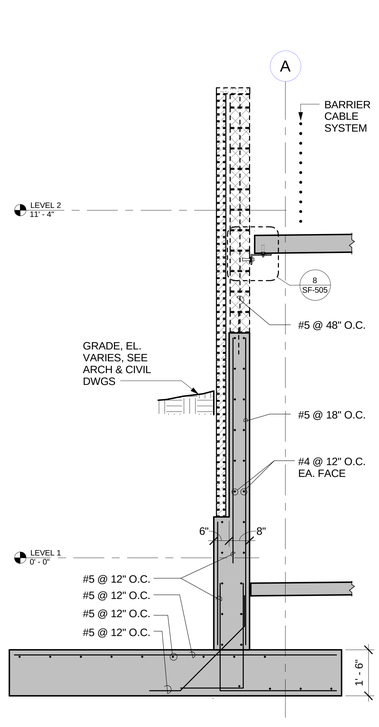
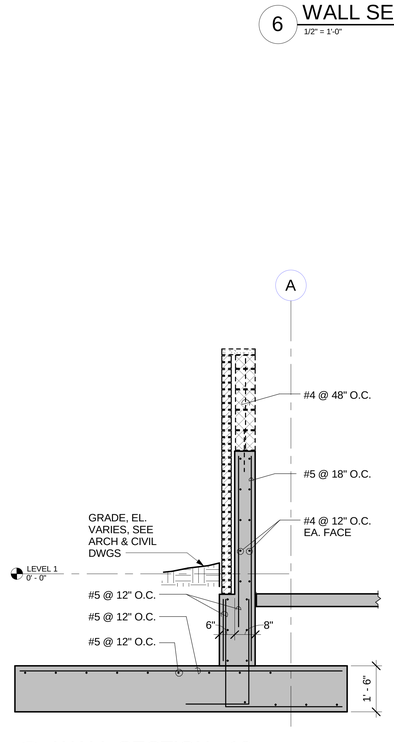


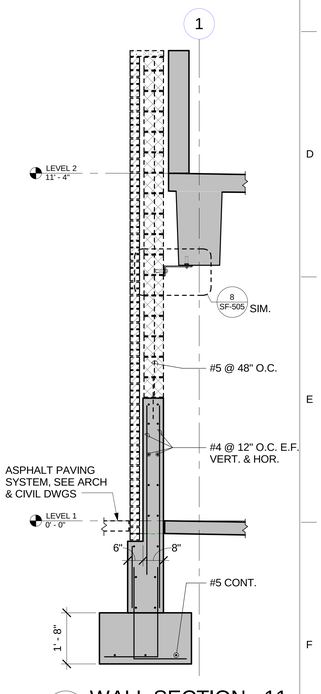
8 WALL SECTION - 8
1/2" = 1'-0"



9 WALL SECTION - 9
1/2" = 1'-0"



10 WALL SECTION - 10
1/2" = 1'-0"



11 WALL SECTION - 11
1/2" = 1'-0"

FINAL SUBMISSION

Scale: 1/2" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: RETAINING WALL DETAILS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:28 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: **SB-531**

Office of Construction and Facilities Management

Department of Veterans Affairs

POST-TENSIONED CONCRETE NOTES

1. THE POST-TENSIONING SYSTEM SHALL CONSIST OF UNBONDED MONO-STRAND TENDONS AND ANCHORS OF FULLY ENCAPSULATED TYPE. STRANDS USED IN POST-TENSIONING SHALL CONFORM TO ASTM A416, STRESS RELIEVED, LOW RELAXATION, 7-WIRE EXTRA HIGH STRENGTH STRAND WITH A GUARANTEED MINIMUM ULTIMATE STRENGTH OF 270,000 PSI.

2. THE POST-TENSIONING TENDONS SHALL BE COATED WITH CORROSION INHIBITIVE COATING AND WRAPPED IN WATERTIGHT EXTRUDED PLASTIC SHEATH. IN-PLACED TENDONS SHALL BE IN SATISFACTORY CONDITION.

3. THE OWNER'S TESTING AGENCY SHALL INSPECT ALL TENDONS IN PLACE PRIOR TO CONCRETE PLACEMENT. ANY DAMAGE TO SHEATHING, TENDONS OR OTHER UNSATISFACTORY CONDITIONS SHALL BE CORRECTED TO THE SATISFACTION OF THE OWNER'S TESTING AGENCY'S REPRESENTATIVE PRIOR TO CONCRETE PLACEMENT.

4. ANCHORAGES FOR POST-TENSIONING TENDONS SHALL BE DESIGNED PER ACI 318 CODE AND COMMENTARY, AND SAMPLES SHALL BE SUBMITTED TO THE ARCHITECT/ENGINEER FOR APPROVAL.

5. UNLESS OTHERWISE SPECIFIED ON THE DRAWINGS, TENDONS SHALL BE PLACED IN SMOOTH PARABOLIC CURVES BETWEEN POINTS DIMENSIONED. HIGH AND LOW POINTS CORRESPOND TO COLUMN CENTERLINE AND MIDSPAN RESPECTIVELY. UNLESS OTHERWISE NOTED, ALL DIMENSIONS LOCATING TENDON PROFILES APPLY TO THE CENTER OF GRAVITY OF THE GROUP OF TENDONS. TENDON PLACEMENT SHALL NOT VARY MORE THAN 1/4" VERTICALLY FROM THE POINTS DIMENSIONED.

6. LOCATION OF INFLECTION POINT OR TANGENT POINT OF CURVE REVERSAL FROM THE CENTERLINE OF SUPPORT SHALL BE L/10 FOR SLABS AND L/20 FOR BEAMS, WHERE "L" IS THE SPAN CENTER-TO- CENTER OF SUPPORTS.

7. AT THE TIME OF STRESSING OF THE TENDONS AT NO LATER THAN 72 HOURS AFTER PLACEMENT, POST-TENSIONED CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3,000 PSI. THE CONTRACTOR SHALL SUBSTANTIATE CONCRETE COMPRESSIVE STRENGTH BEFORE STRESSING TENDONS. IF THE CONCRETE FAILS TO REACH COMPRESSIVE STRENGTH OF 3,000 PSI IN 72 HOURS, THE CONTRACTOR SHALL CONTACT ARCHITECT/ENGINEER FOR GUIDELINES OF PARTIAL STRESSING OF TENDONS. THE NORMAL SEQUENCE OF STRESSING SHALL BE AS FOLLOWS:

A. SLAB TEMPERATURE TENDONS
B. SLAB MAIN TENDONS
C. BEAM TENDONS
D. GIRDER TENDONS

8. TENDONS MAY BE TEMPORARILY OVERSTRESSED TO A MAXIMUM OF 0.8 Fult AND LOCKED OFF AT A MAXIMUM STRESS OF 0.7 Fult. FRICTION LOSSES SHALL BE BASED ON EXPERIMENTALLY DETERMINED WOBBLE AND CURVATURE COEFFICIENTS AND SHALL BE VERIFIED IN FIELD DURING STRESSING OPERATIONS, UNLESS OTHERWISE ACCEPTABLE TO THE ARCHITECT

9. THE POST-TENSIONING SYSTEM MANUFACTURER SHALL SUBMIT CALCULATIONS, TENDON MILL CERTIFICATES, ANCHORAGES TEST RESULTS, AS WELL AS WOBBLE AND CURVATURE COEFFICIENT DETERMINATION DATA TO SUBSTANTIATE THE METHOD OF TENDON FINAL EFFECTIVE FORCE CALCULATIONS. WHEN THE LATTER IS NOT AVAILABLE, THE CALCULATIONS SHALL BE BASED ON A WOBBLE FRICTION COEFFICIENT OF K=0.0015 AND CURVATURE COEFFICIENT u=0.07.

10. THE POST-TENSIONING SYSTEM MANUFACTURER SHALL SUBMIT TO THE ARCHITECT FOR APPROVAL ENGINEERED SHOP DRAWINGS SHOWING, AS A MINIMUM, THE FOLLOWING:

A. FOR SLABS, TENDON LAYOUT AND DIMENSIONS LOCATING TENDONS IN PLAN, TENDON CURVATURE AT BLOCKOUTS, ALL OPENINGS, ANCHORAGES CHAIR HEIGHTS AND LOCATIONS, ANY PLACEMENT STEEL, IF REQUIRED. EACH TENDON MUST BE UNIQUELY MARKED.
B. FOR BEAMS/GIRDERS, TENDON PROFILE IN ELEVATION, ALL OPENINGS, ANCHORAGES AND ANY PLACEMENT STEEL.
C. FOR ALL STRUCTURES, LOCATION OF EACH TENDON, METHOD OF TENDON SUPPORT, DETAILS OF ANCHORAGE ZONE REINFORCEMENT, STRESSING POCKETS, CLOSURES, ETC.

11. THE REQUIRED POST-TENSIONING IS QUANTIFIED ON THE DRAWINGS BY EITHER THE NUMBER OF TENDONS (BEAMS OR SLABS) OR EFFECTIVE FORCE (UNIFORMLY SPACED SLAB TENDONS) WHERE FORCE IS CALLED OUT AS F/E = XX.X k/ft, IT SHALL BE INTERPERTED AS AN AVERAGE FINAL EFFECTIVE FORCE ALONG THE STRESSING LENGTH AFTER ALL LOSSES.

12. FOR COMPONENTS OF THE STRUCTURE WITH EFFECTIVE FORCE SHOWN, THE NUMBERS AND SIZE OF TENDONS SHALL BE DETERMINED BY THE POST-TENSIONING SYSTEM MANUFACTURER BASED ON THE CRITERIA BELOW AND SHALL BE SUBJECT TO THE APPROVAL OF THE ARCHITECT. IN THE EVENT OF A CALCULATED EFFECTIVE POST-TENSIONING FORCE PER TENDON BY THE POST-TENSIONING SYSTEM MANUFACTURER, LESS THAN THE CRITERIA BELOW, THE CONTRACTOR SHALL ADJUST THE TENDON QUANTITIES FOR BEAMS AND/OR GIRDERS ACCORDINGLY, SUBJECT TO THE APPROVAL OF THE ARCHITECT. NO REDUCTIONOF THE NUMBER OF TENDONS WILL BE ALLOWED IN BEAMS/GIRDERS.

A. FOR SLABS, FINAL EFFECTIVE PRESTRESSING FORCE PER 0.5" DIAMETER TENDON SHALL NOT EXCEED 25KIPS.
B. FOR BEAMS AND GIRDERS, THE NUMBERS OF TENDONS REQUIRED IS BASED ON 0.5" DIAMETER TENDONS USING AN EFFECTIVE PRESTRESSING FORCE OF 26.5 KIPS PER TENDON AFTER ALL LOSSES.

13. ALL CALCULATIONS AND POST-TENSIONING SHOP DRAWINGS SHALL BE SEALED AND SIGNED BY A PROFESSIONAL ENGINEER REGISTERED IN THE STATE WHERE THE WORK IS LOCATED.

14. THE POST-TENSIONING SYSTEM MANUFACTURER SHALL SUBMIT TO THE ARCHITECT/ENGINEER, FOR REVIEW, DETAILED PRESTRESSING PROCEDURES AND SEQUENCES, AS WELL AS DETAILED CALCULATIONS TO SUBSTANTIATE THE ABOVE. ALL PRESTRESSING LOSSES SHALL BE ACCOUNTED FOR IN THE CALCULATIONS. COMPLETE POST-TENSIONING PROCEDURE SHALL INCLUDE, AS A MINIMUM, THE FOLLOWING:

A. JACKING FORCES AND JACKING PRESSURES, INCLUDING BUT NOT LIMITED TO MAXIMUM TEMPORARY JACKING FORCE AND JACKING PRESSURE;
B. CERTIFIED JACK CALIBRATION DATA AND METHOD OF JACK IDENTIFICATION; EACH JACK TO BE USED ON THE JOB SHALL BE CALIBRATED NO LATER THAN ONE (1) MONTH PRIOR TO ITS USE;
C. METHOD OF DETERMINING THE SLACK, IF ANY;
D. REQUIRED ELONGATION OF EACH TENDON AT EACH JACKING POINT;
E. METHOD OF DETERMINING ANCHOR FORCE OR FORCE REMAINING IN A TENDON AFTER ANCHORAGE;
F. METHOD OF REMOVING AN EXCESS TENDON LENGTH AFTER ANCHORAGE;
G. METHOD OF SEALING TENDONS AND CLOSING STRESSING POCKETS;
H. SAMPLE STRESSING RECORD.

15. THE CONTRACTOR SHALL SUBMIT TO THE ARCHITECT/ENGINEER A CONCRETE PLACEMENT SEQUENCE FOR APPROVAL. ALL CONSTRUCTION JOINTS SHALL BE CLEARLY DEFINED AND DIMENSIONED.

16. ALL TENDONS SHALL BE SECURELY SUPPORTED AT INTERVALS NOT EXCEEDING 36 INCHES ON-CENTER. A MINIMUM OF 2 TENDONS SHALL PASS THROUGH EACH COLUMN IN EACH PRINCIPAL DIRECTION.

17. ALL OPENINGS IN POST-TENSIONED SLABS OR BEAMS SHALL BE FORMED OR SLEEVED. CORING OF POST-TENSIONED BEAMS OR SLABS WILL NOT BE PERMITTED WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/ENGINEER. ALL OPENINGS AND/OR SLEEVES MUST BE SHOWN ON THE SHOP DRAWINGS. ANY ADDITIONAL OPENINGS, NOT SHOWN ON THE APPROVED SHOP DRAWINGS WILL REQUIRE A WRITTEN APPROVAL FROM THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION. THE CONTRACTOR SHALL PROVIDE ADDITIONAL REINFORCEMENT AROUND THE OPENINGS.

18. MAXIMUM PERMITTED PENETRATION INTO THE POST-TENSIONED CONCRETE SLABS AND BEAMS DUE TO DRILLED-IN INSERTS SHALL NOT EXCEED 3/4" AND 1 1/2" RESPECTIVELY. PROVIDE CAST-IN INSERTS FOR HANGING DUCTS, PIPES OR OTHER MECHANICAL EQUIPMENT WHERE POSSIBLE, AND WHERE THE SPECIFIED MAXIMUM EMBEDMENT DRILLED-IN INSERT WILL NOT PROVIDE SUFFICIENT CAPACITY.

19. TENDON STRESSING LOG CONTAINING INFORMATION ON AREA AFFECTED, REQUIRED AND MEASURED ELONGATIONS, AS WELL AS CALIBRATED JACK GAUGE READINGS SHALL BE SUBMITTED TO THE ARCHITECT/ ENGINEER FOR APPROVAL PRIOR TO ANY REMOVAL OF THE EXCESS TENDON LENGTH OR PRIOR TO CONCRETE PLACEMENT INTO THE IMMEDIATELY ADJACENT AREA. TENDON STRESSING LOGS SHALL BE DATED AND SIGNED BY THE STRESSING OPERATOR, THE TESTING AGENCY AND THE CONTRACTOR.

20. PRESTRESSING FORCE TRANSFERRED TO THE STRUCTURE (STRESSING RECORD) SHALL BE APPROVED BY THE ARCHITECT/ENGINEER BEFORE TERMINATION OF ANY TENDON ENDS OR CONCRETING THE ADJACENT PART, OR INTRODUCING A CONTINUITY OF THE STRUCTURE THAT WOULD PREVENT ANY REMEDIAL WORK TO BE PERFORMED ON CONCRETE OR TENDONS IDENTIFIED BY THE RECORD.

21. AFTER ACCEPTANCE AND APPROVAL OF STRESSING RECORDS BY THE ARCHITECT/ENGINEER, CUT OFF TENDON TAILS ABOUT 1/2" INSIDE THE POCKET AS SPECIFIED, SEAL TENDON TAILS WITH RUST INHIBITING TREATMENT AND POSITIVELY CONNECTED GASKETED PLASTIC CAP, AND DRY-PACK ALL POST-TENSIONING POCKETS WITH NON-SHRINK, NON-FERROUS GROUT. THE FINAL COLOR AND FINISH OF THE PATCH IN EXPOSED AREAS SHALL MATCH THE ADJACENT CAST-IN-PLACE CONCRETE AS VERIFIED AND APPROVED BY THE ARCHITECT/ENGINEER PRIOR TO CONSTRUCTION.

22. SEE SPECIFICATIONS FOR FURTHER REQUIREMENTS FOR ALL POST-TENSIONED CONCRETE WORK.

23. SEE SHEETS SB-001 AND SB-002 FOR ADDITIONAL REQUIRMEENTS AND RELATED WORK.

MASONRY NOTES

1. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS FOR MASONRY STRUCTURES ACI 530.1-05/ASCE 6-05/TMS 602-05.

2. MATERIALS:

A. LOAD-BEARING CONCRETE MASONRY UNITS SHALL CONFORM TO ASTM C90, TYPE 1, WITH A MINIMUM UNIT COMPRESSIVE STRENGTH OF 2,500 PSI ON THE NET SECTION.
B. LOAD-BEARING BRICK SHALL CONFORM TO ASTM C62 AND/OR ASTM C-216 WITH A MINIMUM UNIT COMPRESSIVE STRENGTH OF 3,000 PSI.
C. CONCRETE BUILDING BRICK SHALL CONFORM TO ASTM C55, TYPE I, GRADE S OR N WITH MINIMUM UNIT COMPRESSIVE STRENGTH OF 2,500 PSI AS AN AVERAGE OF THREE (3) BRICKS.
D. MORTAR AND GROUT:

1. MORTAR FOR REINFORCED AND NON-REINFORCED LOAD BEARING MASONRY SHALL CONFORM TO ASTM C270, PORTLAND - LIME, TYPE N BY PROPORTION, TO ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 1,000 PSI.
2. GROUT SHALL CONFORM TO ASTM C476, TO ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 2,000 PSI.

E. MASONRY:

1. COMPRESSIVE STRENGTH f'm OF ANY MASONRY SHALL BE DETERMINED BASED ON THE STRENGTH OF THE UNITS AND SHALL NOT BE LESS THAN 1,500 PSI.

F. REINFORCING BARS:

1. REINFORCING BARS FOR REINFORCED MASONRY SHALL CONFORM TO ASTM A615, GRADE 60, UNLESS NOTED OTHERWISE.

3. VERTICAL CELLS TO BE FILLED WITH GROUT SHALL BE ALIGNED TO PROVIDE A CONTINUOUS, UNOBSTRUCTED OPENING OF THE DIMENSIONS SHOWN ON THE PLANS. CELLS WHICH WILL CONTAIN VERTICAL REINFORCEMENT SHALL HAVE A MINIMUM OF TWO (2) INCH CLEAR OPENING.

4. GROUT FOR FILLING REINFORCED OR NON-REINFORCED CELLS SHALL BE FLUID WITH A 9" TO 11" SLUMP, AND PLACED BY ACCEPTABLE PRESSURE GROUTING PROCEDURES.

5. GROUT FOR FILLING REINFORCED OR NON-REINFORCED CELLS SHALL BE PLACED IN MAXIMUM FOUR (4) FOOT LIFTS AND CONSOLIDATED IN PLACE BY VIBRATION OR OTHER METHODS WHICH INSURE COMPLETE FILLING OF THE CELLS. ALL CELLS CONTAINING REINFORCING BARS AND/OR ANCHOR BOLTS SHALL BE FULLY GROUTED.

6. HOLLOW UNITS SHALL BE LAID WITH FULL MORTAR COVERAGE ON HORIZONTAL AND VERTICAL FACE SHELLS EXCEPT THAT WEBS SHALL ALSO BE BEDDED WHERE THEY ARE ADJACENT TO CELLS TO BE REINFORCED AND/OR FILLED WITH GROUT, IN THE STARTING COURSE ON FOOTINGS AND SOLID FOUNDATION WALLS AND IN NON-REINFORCED OR GROUTED PIERS, PILASTERS AND COLUMNS.

7. SOLID MASONRY UNITS SHALL BE LAID WITH FULL HEAD AND BED JOINTS.

8. POINTS OF BEARING SHALL BE ON TWO (2) COURSES OF SOLID MASONRY OR TWO (2) COURSES OF HOLLOW MASONRY GROUTED SOLID.

9. ALL CUTTING AND FITTING OF MASONRY, INCLUDING THAT REQUIRED TO ACCOMMODATE THE WORK OF OTHER TRADES, SHALL BE DONE WITH MASONRY SAWS.

10. CHASES SHALL BE BUILT INTO WALLS, NOT CUT IN. CHASES SHALL BE PLUMB AND SHALL BE A MINIMUM OF ONE (1) MASONRY UNIT LENGTH FROM JAMBS OF WALL OPENINGS. NO CHASES OTHER THAN THOSE SHOWN ON THE DRAWINGS SHALL BE CONSTRUCTED WITHOUT PRIOR REVIEW OF THE ARCHITECT.

11. REINFORCED MASONRY:

A. ALL WALLS AND PIERS SHALL HAVE HORIZONTAL JOINT REINFORCEMENTS AT 16" ON CENTER CONSISTING OF TWO (2) 9 GAGE RODS WITH 9 GAGE CROSS TIES AT 16" ON CENTER, GALVANIZED WITH 0.8 OZ. ZINC COATING, ASTM A116, CLASS 3. FOR COMPOSITE OR CAVITY WALLS PROVIDE TWO (2) RODS IN C.M.U. AND ONE (1) ROD IN FACE BRICK.
B. THE MINIMUM CLEAR DISTANCE BETWEEN PARALLEL BARS EXCEPT IN COLUMNS SHALL BE EQUAL TO THE NOMINAL DIAMETER OF THE BAR, BUT SHALL NOT BE LESS THAN 1".
C. VERTICAL REINFORCEMENT SHALL BE LAP SPLICED A MINIMUM OF 48 BAR DIAMETERS (NOT LESS THAN 1'-0") WHERE REQUIRED.
D. ALL BARS SHALL BE COMPLETELY EMBEDDED IN MORTAR OR GROUT. ALL BARS SHALL HAVE A COVERAGE OF MASONRY NOT LESS THAN:

· 2" - FOR BARS LARGER THAN #5
· 1-1/2" - FOR #5 BARS AND SMALLER.

12. PROVIDE ADEQUATE, TEMPORARY BRACING AS REQUIRED DURING CONSTRUCTION TO WITHSTAND LATERAL LOADS AND THE PRESSURES OF FLUID GROUT.

13. CONCRETE MASONRY SHALL BE PROTECTED FROM ABSORBING MOISTURE AND WATER WHILE AT THE PLANT, DURING SHIPMENT AND AT THE SITE DURING CONSTRUCTION.

14. ANCHORS, WALL PLUGS, ACCESSORIES AND OTHER ITEMS TO BE BUILT IN SHALL BE INSTALLED AS THE MASONRY WORK PROGRESSES. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL DETAILS.

15. FOR LINTEL NOTES AND SCHEDULE SEE DRAWING SF-505.

16. SEE SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

17. SEE SHEETS SB-001 AND SB-002 FOR ADDITIONAL REQUIREMENTS AND RELATED WORK.

STRUCTURAL STEEL NOTES:

1. SEAL-WELD OPEN ENDS OF HOLLOW STRUCTURAL SECTIONS WITH 3/8-INCH CLOSURE PLATES WHERE EXPOSED TO MOISTURE.

2. ALL WELDS SHOWN ON THESE DRAWINGS CAN BE EITHER SHOP OR FILED WELDS AS NECESSARY.

3. WHERE INTERMITTENT STRUCTURAL WELDS ARE SHOWN, PROVIDE SEAL WELDS BETWEEN STRUCTURAL WELDS WHERE EXPOSURE TO MOISTURE IS A POSSIBILITY.

4. ARCHITECTURALLY EXPOSED STRUCTURAL STEEL (AESS)

A. ALL STEEL AND CONNECTIONS THAT ARE EXPOSED TO VIEW (NOT COVERED BY CEILING, CLADDING ETC) ON THESE DRAWINGS ARE AESS WHETHER IDENTIFIED ON THESE CD OR NOT. AS A MINIMUM THEY SHALL MEET THE FOLLOWING REQUIREMENT.

5. DELIVERY, STORAGE, AND HANDLING

A. USE SPECIAL CARE IN HANDLING TO PREVENT TWISTING, WARPING, NICKING, AND OTHER DAMAGE. STORE MATERIALS TO PERMIT EASY ACCESS FOR INSPECTION AND IDENTIFICATION. KEEP STEEL MEMBERS OFF GROUND AND SPACED BY USING PALLETS, DUNNAGE, OR OTHER SUPPORTS AND SPACERS.
B. DO NOT STORE MATERIALS ON STRUCTURE IN A MANNER THAT MIGHT CAUSE DISTORTION, DAMAGE, OR OVERLOAD TO MEMBERS OR SUPPORTING STRUCTURES
C. SAMPLES: SUBMIT SAMPLES OF AESS TO SET QUALITY STANDARDS FOR EXPOSED WELDS.
1. TWO STEEL PLATES, 3/8 BY 8 BY 4 INCHES, WITH LONG EDGES JOINED BY A GROOVE WELD AND WITH WELD GROUND SMOOTH.
2. STEEL PLATE, 3/8 BY 8 BY 8 INCHES, WITH ONE END OF A SHORT LENGTH OF RECTANGULAR STEEL TUBE, 4 BY 6 BY 3/8 INCHES, WELDED TO PLATE WITH A CONTINUOUS FILLET WELD AND WITH WELD GROUND SMOOTH AND BLENDED.

6. FABRICATION

A. IN ADDITION TO SPECIAL CARE USED TO HANDLE AND FABRICATE AESS, COMPLY WITH THE FOLLOWING:
B. FABRICATE WITH EXPOSED SURFACES SMOOTH, SQUARE, AND FREE OF SURFACE BLEMISHES.
C. GRIND SHEARED, PUNCHED, AND FLAME-CUT EDGES SMOOTH.
D. FABRICATE WITH EXPOSED SURFACES FREE OF MILL MARKS.
E. FABRICATE WITH EXPOSED SURFACES FREE OF SEAMS TO MAXIMUM EXTENT POSSIBLE.
F. REMOVE BLEMISHES BY FILLING OR GRINDING OR BY WELDING AND GRINDING, BEFORE CLEANING, TREATING, AND SHOP PRIMING.
G. FABRICATE WITH PIECE MARKS FULLY HIDDEN IN THE COMPLETED STRUCTURE OR MADE WITH MEDIA THAT PERMITS FULL REMOVAL AFTER ERECTION.
H. FABRICATE TO THE TOLERANCES SPECIFIED IN AISC 303 FOR STEEL THAT IS DESIGNATED AESS.
I. SEAL-WELD OPEN ENDS OF HOLLOW STRUCTURAL SECTIONS WITH 3/8-INCH CLOSURE PLATES.
J. COPING, BLOCKING, AND JOINT GAPS: MAINTAIN UNIFORM GAPS OF 1/8 INCH WITH A TOLERANCE OF 1/32 INCH.
K. BOLT HOLES: CUT, DRILL, OR PUNCH STANDARD BOLT HOLES PERPENDICULAR TO METAL SURFACES.
L. HOLES: PROVIDE HOLES REQUIRED FOR SECURING OTHER WORK TO STRUCTURAL STEEL AND FOR OTHER WORK TO PASS THROUGH STEEL FRAMING MEMBERS.
M. CUT, DRILL, OR PUNCH HOLES PERPENDICULAR TO STEEL SURFACES. DO NOT THERMALLY CUT BOLT HOLES OR ENLARGE HOLES BY BURNING.
N. BASEPLATE HOLES: CUT, DRILL, MECHANICALLY THERMAL CUT, OR PUNCH HOLES PERPENDICULAR TO STEEL SURFACES.
O. WELD THREADED NUTS TO FRAMING AND OTHER SPECIALTY ITEMS INDICATED TO RECEIVE OTHER WORK.

7. WELD CONNECTIONS: COMPLY WITH AWS D1.1/D1.1M FOR TOLERANCES, APPEARANCES, WELDING PROCEDURE SPECIFICATIONS, WELD QUALITY, AND METHODS USED IN CORRECTING WELDING WORK, AND COMPLY WITH THE FOLLOWING:

A. ASSEMBLE AND WELD BUILT-UP SECTIONS BY METHODS THAT WILL MAINTAIN TRUE ALIGNMENT OF AXES WITHOUT EXCEEDING SPECIFIED TOLERANCES.
B. USE WELD SIZES, FABRICATION SEQUENCE, AND EQUIPMENT THAT LIMIT DISTORTIONS TO ALLOWABLE TOLERANCES.
C. PROVIDE CONTINUOUS, SEALED WELDS AT ANGLE TO GUSSET-PLATE CONNECTIONS AND SIMILAR LOCATIONS WHERE AESS IS EXPOSED TO WEATHER.
D. PROVIDE CONTINUOUS WELDS OF UNIFORM SIZE AND PROFILE WHERE AESS IS WELDED.
E. MAKE BUTT AND GROOVE WELDS FLUSH TO ADJACENT SURFACES WITHIN TOLERANCE OF PLUS 1/16 INCH, MINUS 0 INCH. DO NOT GRIND UNLESS REQUIRED FOR CLEARANCES OR FOR FITTING OTHER COMPONENTS, OR UNLESS DIRECTED TO CORRECT UNACCEPTABLE WORK.
F. REMOVE BACKING BARS OR RUNOFF TABS; BACK-GOUGE AND GRIND STEEL SMOOTH.
G. AT LOCATIONS WHERE WELDING ON THE FAR SIDE OF AN EXPOSED CONNECTION OF AESS OCCURS, GRIND DISTORTIONS AND MARKING OF THE STEEL TO A SMOOTH PROFILE ALIGNED WITH ADJACENT MATERIAL.
H. MAKE FILLET WELDS OF UNIFORM SIZE AND PROFILE WITH EXPOSED FACE SMOOTH AND SLIGHTLY CONCAVE. DO NOT GRIND UNLESS DIRECTED TO CORRECT UNACCEPTABLE WORK.

8. REPAIRS AND PROTECTION

A. REMOVE WELDED TABS THAT WERE USED FOR ATTACHING TEMPORARY BRACING AND SAFETY CABLING AND THAT ARE EXPOSED TO VIEW IN THE COMPLETED WORK. GRIND STEEL SMOOTH.
B. GALVANIZED SURFACES: CLEAN FIELD WELDS, BOLTED CONNECTIONS, AND ABRADED AREAS AND REPAIR GALVANIZING TO COMPLY WITH ASTM A 780.

FINAL SUBMISSION

Scale: 3/4" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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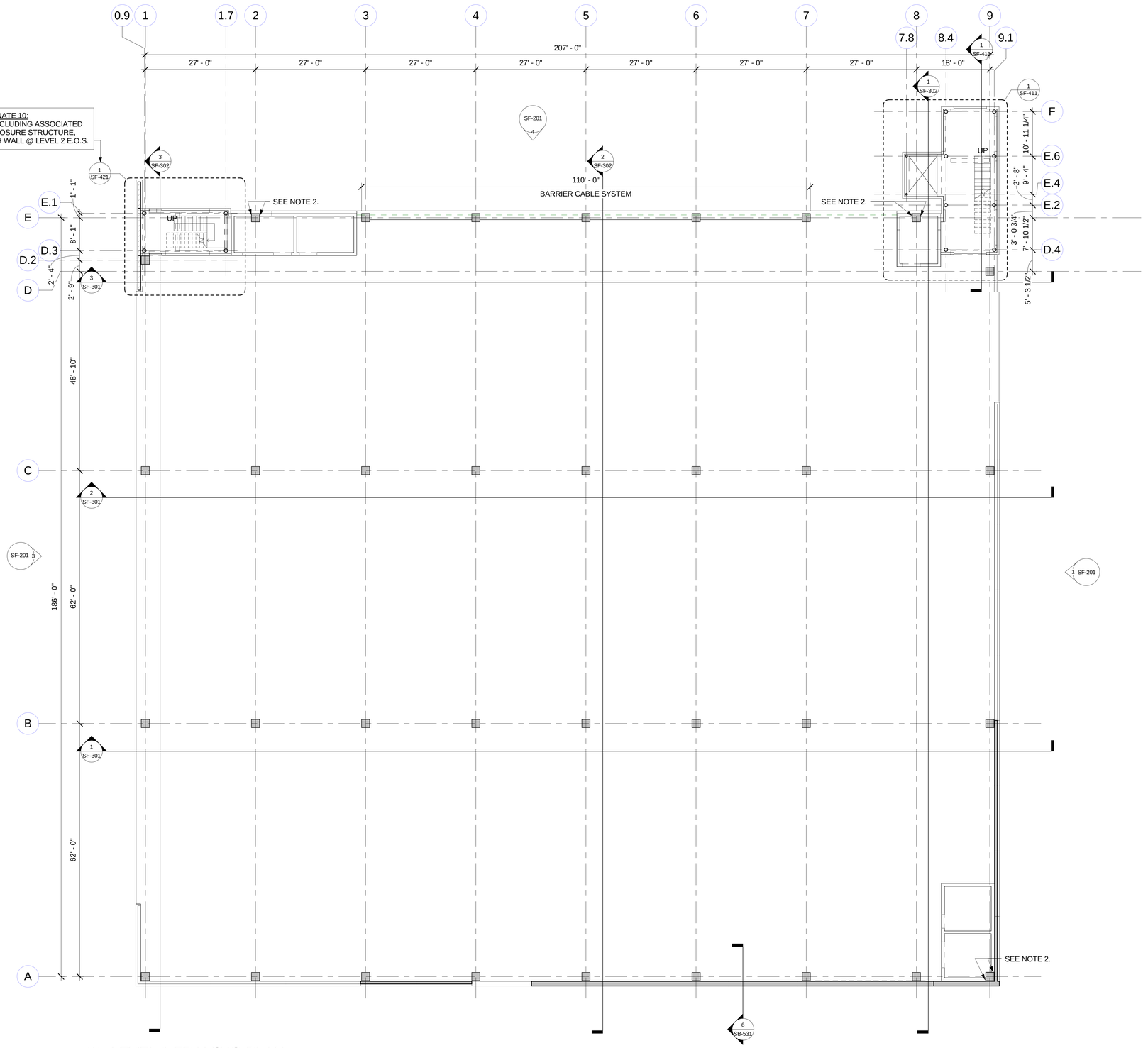
Drawing Title: STRUCTURAL FRAMING GENERAL NOTES
Approved: J.H.
Project Title: VA Erie Parking Structure
Location: Erie, PA
Date: 9/19/2013 10:49:28 AM
Checked: B.I.
Drawn: D.R.W.
Project Number: 11159.00
Building Number:
Drawing Number: SF-001

Office of Construction and Facilities Management
Department of Veterans Affairs



1 LEVEL 1 FRAMING PLAN
3/32" = 1'-0"

NOTES:

1. SEE SF-602 FOR CONC. COLUMN INFORMATION.

2. PROVIDE 2" ISOLATION JT. BETWEEN COL. & CMU WALLS. SEE ARCH. FOR FIRESAFE, WATER PROOFING & OTHER REQUIREMENTS.

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: LEVEL 1 FRAMING PLAN

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:29 AM

Checked: B.I.

Drawn: D.R.W.

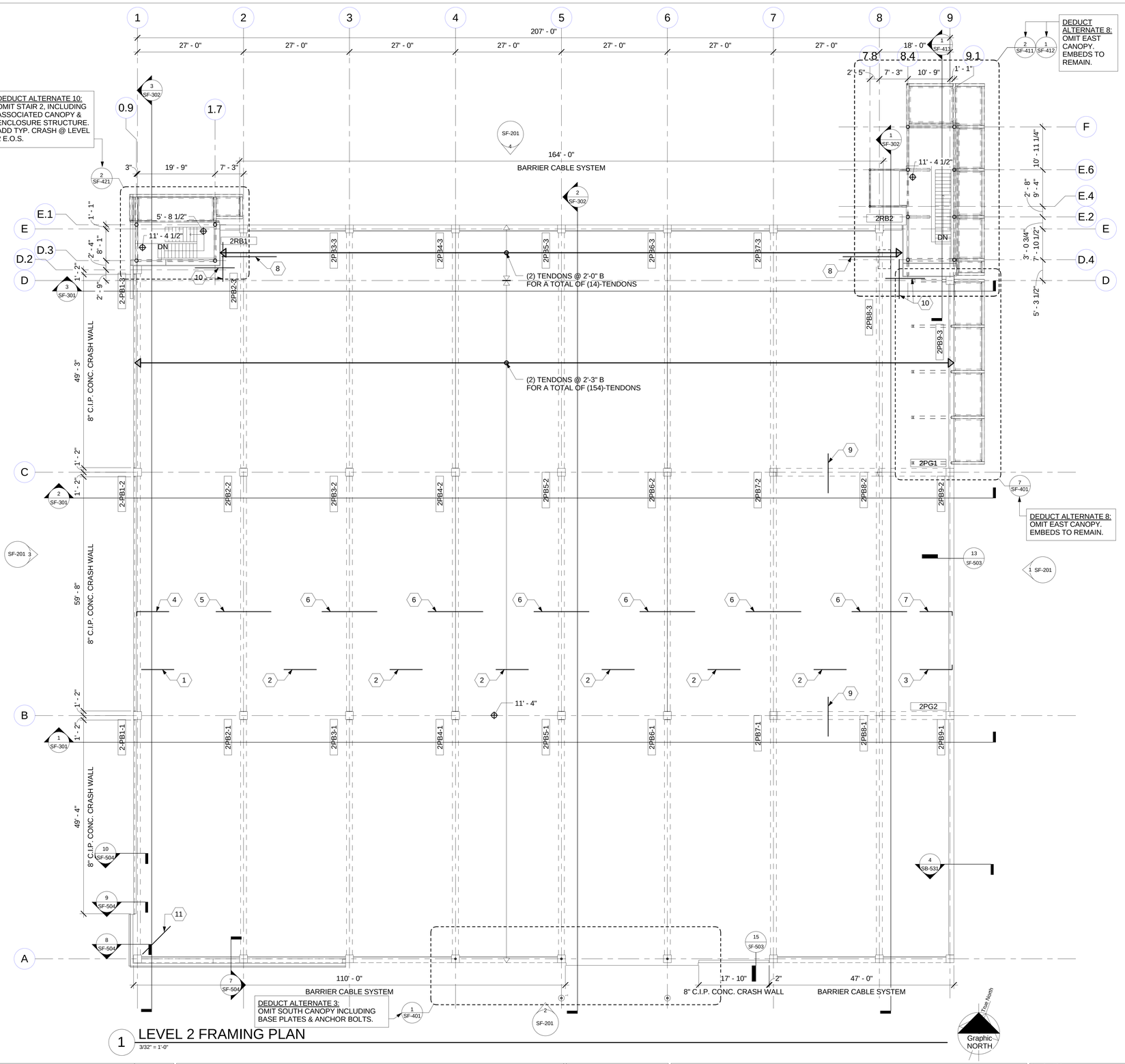
Project Number: 11159.00

Building Number:

Drawing Number: **SF-101**

Office of Construction and Facilities Management

Department of Veterans Affairs



1 LEVEL 2 FRAMING PLAN
3/32" = 1'-0"

SHEET NOTES

1. GENERAL NOTES:

1.1 SEE ARCH. DRAWINGS FOR FINISH FLOOR SPOT ELEVATIONS.

1.2 SEE MECH. & ARCH. DRAWINGS FOR FLOOR DRAINS.

1.3 SEE COVER SHEET FOR DRAWING SHEET INDEX.

2. STRUCTURAL FRAMING NOTES:

2.1 STRUCTURAL FLOOR FRAMING CONSISTS OF POST-TENSIONING CONCRETE ONE-WAY SLABS AND BEAMS SYSTEM.

2.2 CAMBER UP 1/4" FOR ALL 62'-0" (+/-) BEAMS.

3. CONCRETE NOTES:

3.1 SLAB THICKNESS = 7" TYP. UNO

4. POST-TENSIONING NOTES:

4.1 UNLESS NOTED OTHERWISE TENDON ORDINATES ARE MEASURED FROM SLAB SOFFIT AND ARE AS FOLLOWS:
EXTERIOR SPANS: 1 3/4" AT MID SPAN
INTERIOR SPANS: 1 1/4" AT MID SPAN
OVER SUPPORTS: 4 3/4"
AT END OF SLABS: MID DEPTH

4.2 DETAIL SUCH THAT MINIMUM TWO (2) TENDONS PASS THRU COLUMN ALONG LINES A, B, C, D, AND E.

4.3 PROVIDE TEMPERATURE TENDON AT 3-FT. O.C. AS FOLLOWS:
18'-0" BAYS: (6)-TENDONS
27'-0" BAYS: (9)-TENDONS

4.4 PARTIALLY STRESS TEMP. TENDONS TO 8,000 POUNDS THE DAY OF CASTING WHEN THE CONCRETE STRENGHT IS 1,000 PSI. FULLY STRESS THE TEMP. TENDONS WHEN THE CONCRETE HAS REACHED 3,000 PSI.

5. REBAR NOTES:

5.1 PROVIDE CLEAR COVER TO REBAR AS FOLLOWS:
SLAB BOTTOM BARS = 1"
SLAB TOP BARS = 2"
SLAB STIRRUPS AT TOP = 2"

5.2 ALL REBAR IN SLAB, BEAM TOP BARS, UPTURN BEAM BOTTOM BARS, BEAM & GIRDER STIRRUPS SHALL BE EPOXY COATED.

5.3 PROVIDE 90 DEG. HOOK FOR ALL REBAR AT EXTERIOR ENDS WHETHER SHOWN ON PLANS OR NOT.

5.4 PROVIDE 2-#5 TOP AND BOTTOM ALONG THE SLAB EXTERIOR EDGES.

5.5 PROVIDE ADDITIONAL 2-#5 CONTINUOUS TOP AND BOTTOM THROUGH COLUMNS ALONG LINES A, B, C, AND D.

5.6 UNLESS NOTED OTHERWISE, FOR SLABS PROVIDE #5 X 10'-0" @ 24" O.C. BOTTOM BETWEEN BEAMS AND #5 X 10'-0" @ 18" O.C. @ TOP OVER BEAMS.

5.7 REBAR KEY NOTES ARE AS FOLLOWS:

1. #5 X 15'-0" @ 22" O.C. BOTTOM
2. #5 X 10'-0" @ 22" O.C. BOTTOM
3. #5 X 12'-0" @ 18" O.C. BOTTOM
4. #5 X 7'-0" @ 18" O.C. TOP
5. #5 X 10'-0" @ 22" O.C. TOP
6. #5 X 10'-0" @ 22" O.C. TOP
7. #5 X 7'-0" @ 18" O.C. TOP
8. #5 X 15'-0" @ 12" O.C. TOP
9. #5 X 12'-0" @ 18" O.C. TOP
10. 3- #5 X 10'-0" @ 4" O.C. TOP & BOTTOM
11. 5-#4X10' TOP FAN REBAR

FINAL SUBMISSION
Scale: 3/32" = 1'-0"

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Location: Erie, PA
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Drawing Number: SF-102

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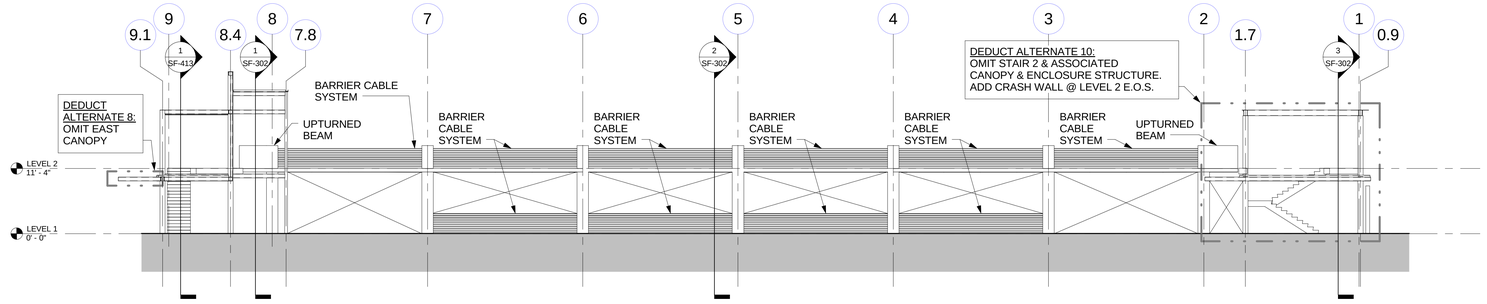
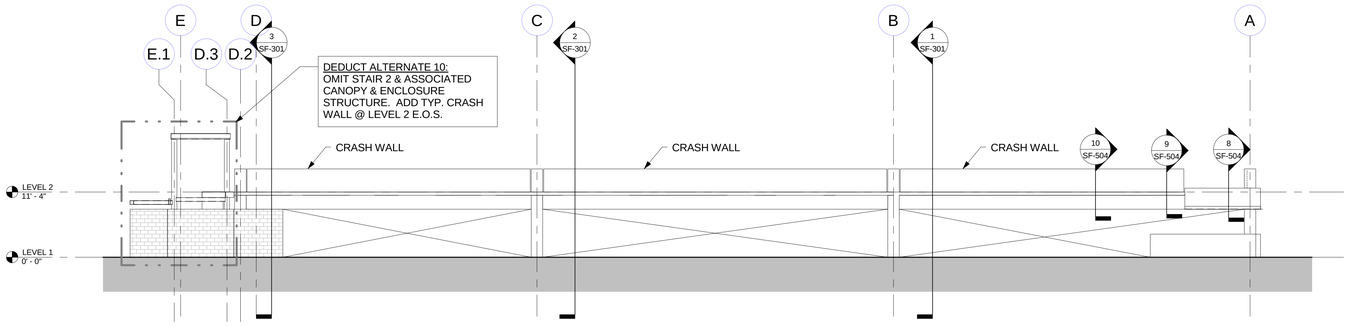
Department of Veterans Affairs



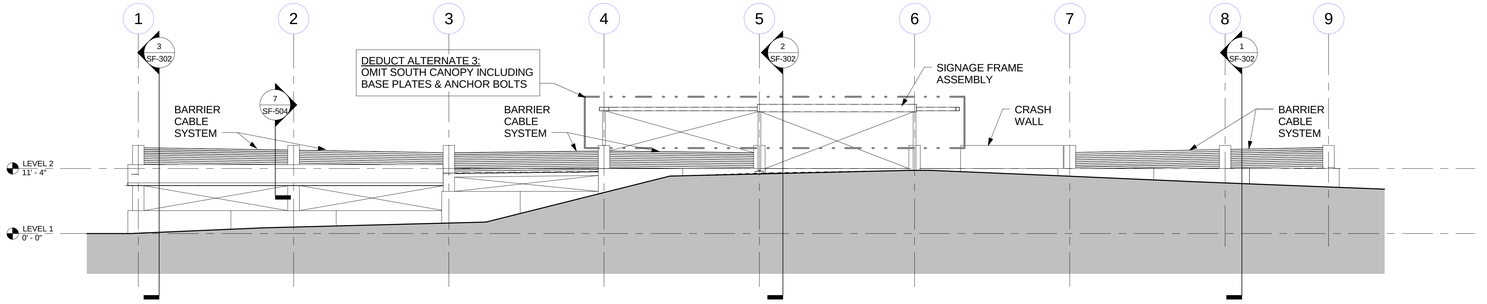
4 STRUCTURAL NORTH ELEVATION

3/32" = 1'-0"



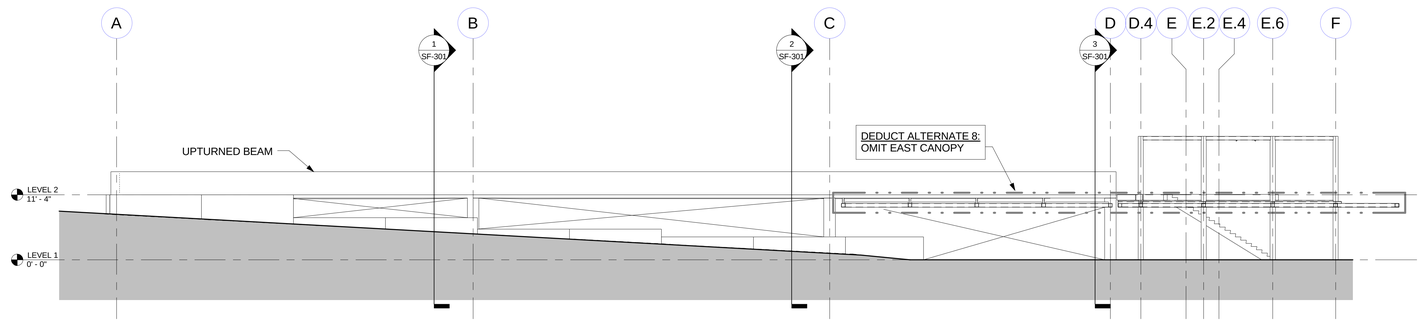
3 STRUCTURAL WEST ELEVATION

3/32" = 1'-0"



2 STRUCTURAL SOUTH ELEVATION

3/32" = 1'-0"



1 STRUCTURAL EAST ELEVATION

3/32" = 1'-0"

FINAL SUBMISSION

Scale: 3/32" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: STRUCTURAL ELEVATIONS

Approved: J.H.

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Location: Erie, PA

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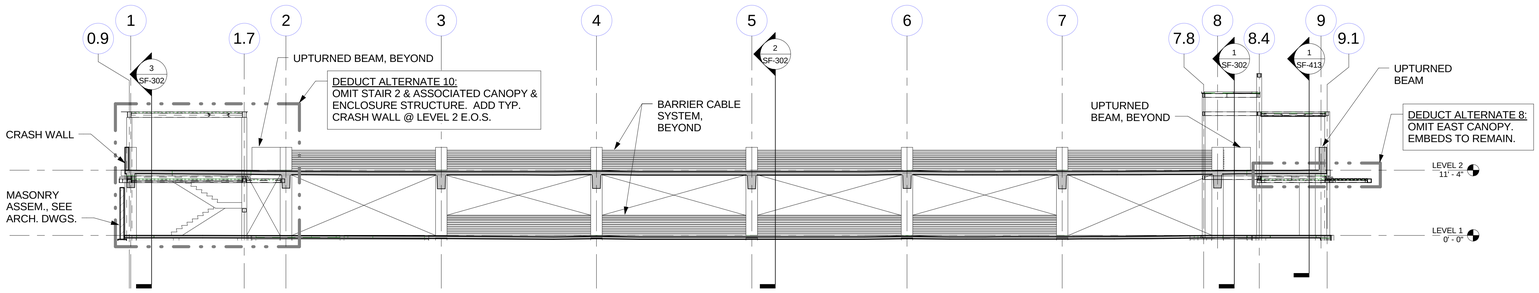
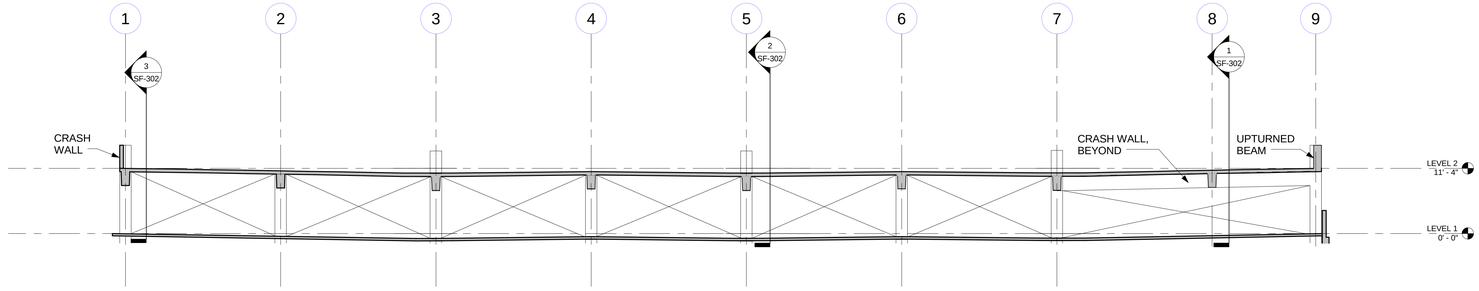
Office of Construction and Facilities Management

Department of Veterans Affairs



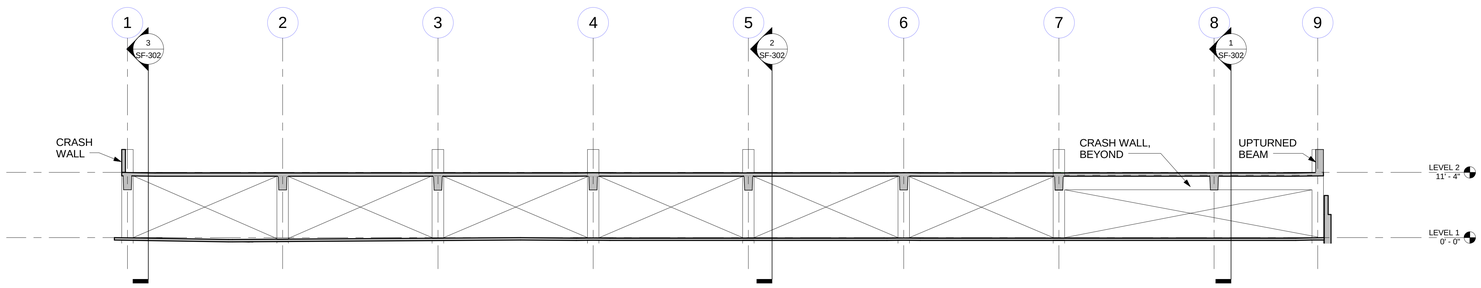
3 LONGITUDINAL SECTION NORTH BAY

3/32" = 1'-0"



2 LONGITUDINAL SECTION - CENTER BAY

3/32" = 1'-0"



1 LONGITUDINAL SECTION - SOUTH BAY

3/32" = 1'-0"

FINAL SUBMISSION

Scale: 3/32" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: LONGITUDINAL BUILDING SECTIONS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:33 AM

Checked: J.H.

Drawn: D.R.W.

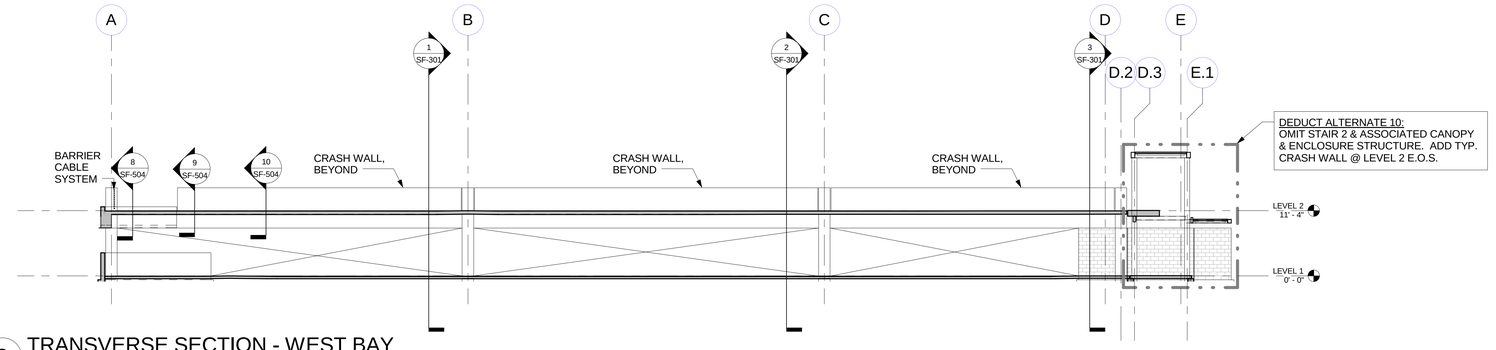
Project Number: 11159.00

Building Number:

Drawing Number: **SF-301**

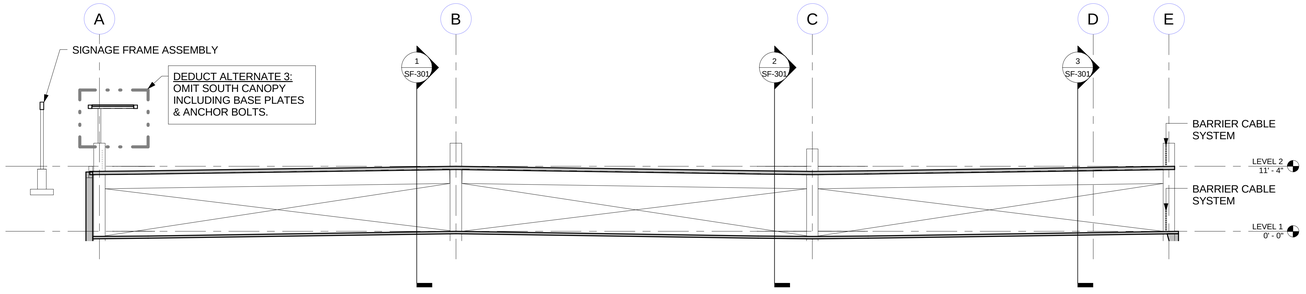
Office of Construction and Facilities Management

Department of Veterans Affairs



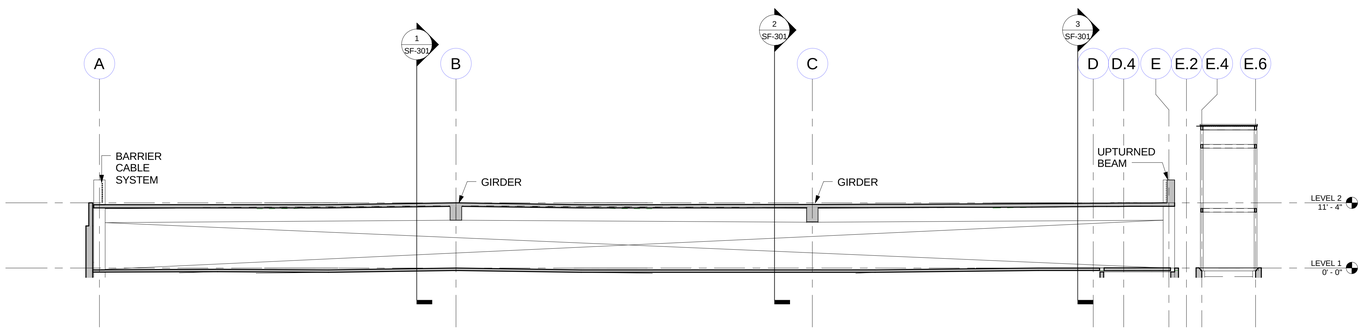
3 TRANSVERSE SECTION - WEST BAY

3/32" = 1'-0"



2 TRANSVERSE SECTION - ENTRY BAY

3/32" = 1'-0"



1 TRANSVERSE SECTIONS - EAST BAY

3/32" = 1'-0"

FINAL SUBMISSION

Scale: 3/32" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

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Drawing Title: TRANSVERSE BUILDING SECTIONS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:34 AM

Checked: J.H.

Drawn: D.R.W.

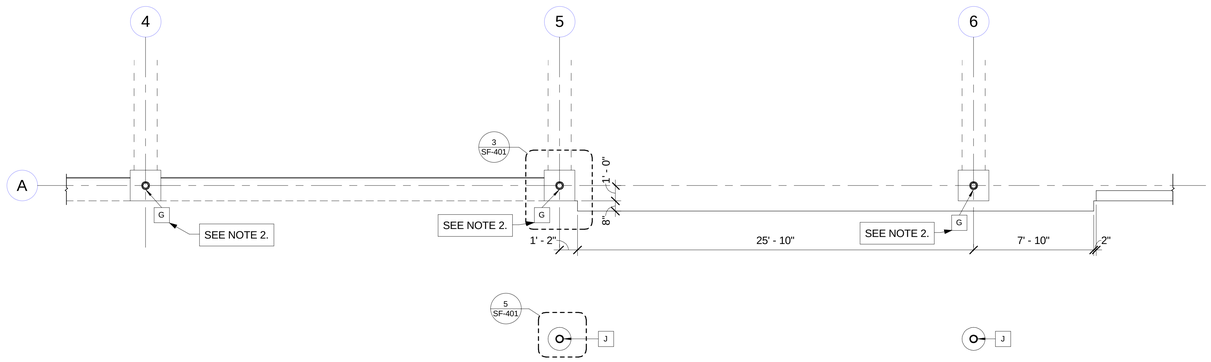
Project Number: 11559.00

Building Number:

Drawing Number: **SF-302**

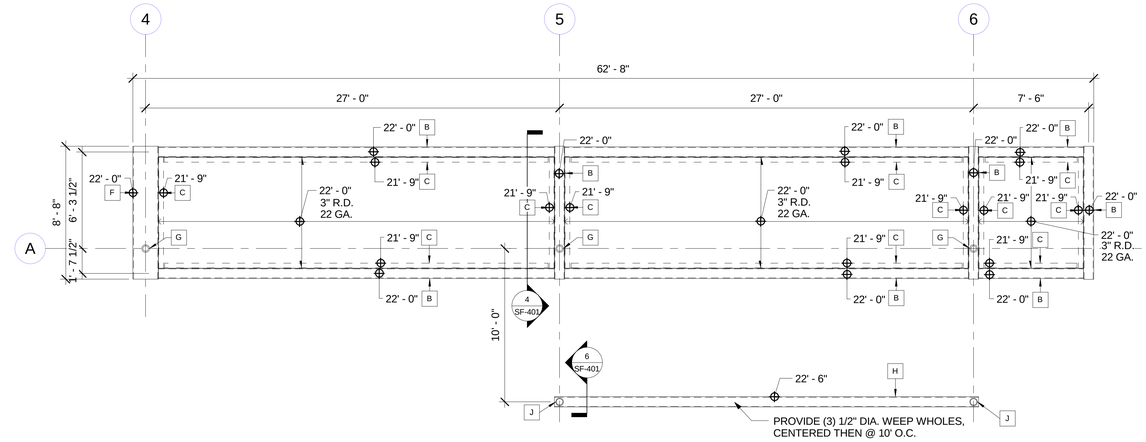
Office of Construction and Facilities Management

Department of Veterans Affairs



1 LEVEL 2 ENTRY DRIVE ENLARGED PLAN

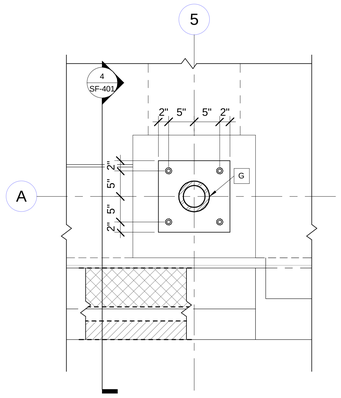
1/4" = 1'-0"



2 LEVEL 2 DRIVE CANOPY FRAMING PLAN

SEE NOTE 2.

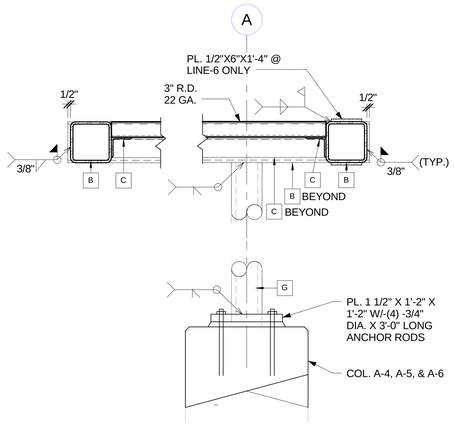
1/4" = 1'-0"



3 LEVEL 2 DRIVE CANOPY PLAN DETAIL

SEE NOTE 2.

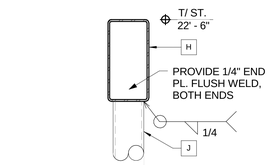
1" = 1'-0"



4 LEVEL 2 DRIVE CANOPY SECTION

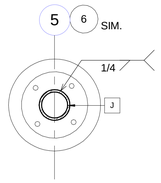
SEE NOTE 2.

1" = 1'-0"



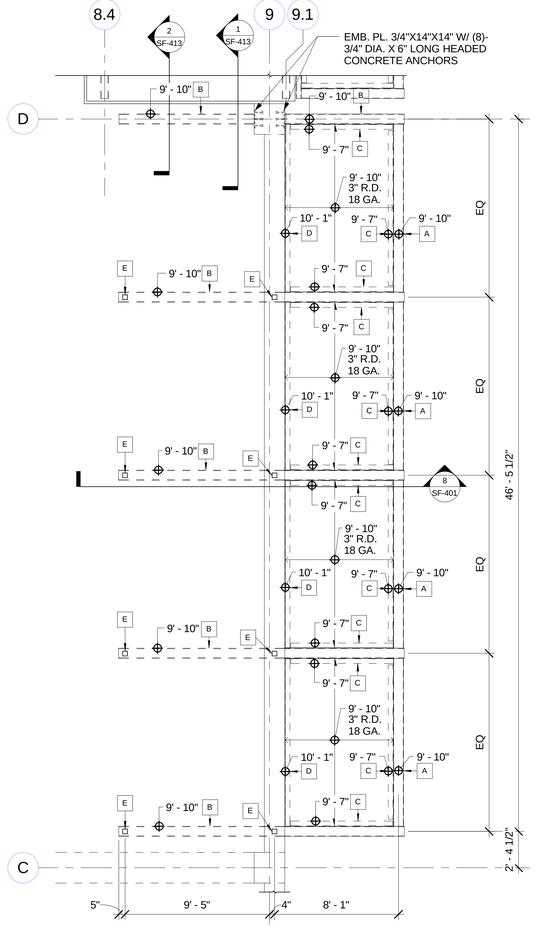
6 SIGNAGE FRAME SECTION

1" = 1'-0"



5 SIGNAGE FRAME PLAN

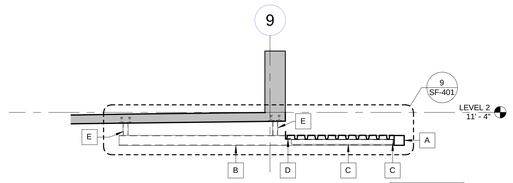
1" = 1'-0"



7 LEVEL 1 DRIVE CANOPY FRAMING PLAN

SEE NOTE 3.

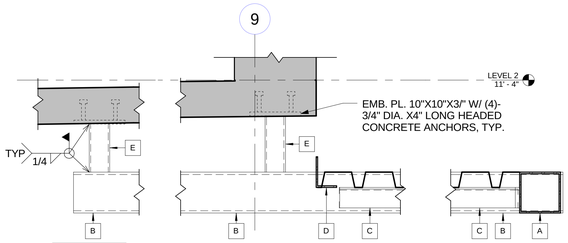
1/4" = 1'-0"



8 LEVEL 1 DRIVE CANOPY SECTION

SEE NOTE 3.

1/4" = 1'-0"



SEE NOTE 3.

9 LEVEL 1 DRIVE CANOPY DETAIL

1" = 1'-0"

NOTES:

1. ELEVATIONS THIS SHEET ARE TOP OF STEEL, U.N.O.
2. DEDUCT ALTERNATE 3: OMIT SOUTH CANOPY INCLUDING BASE PLATE & ANCHOR BOLTS.
3. DEDUCT ALTERNATE 8: OMIT EAST CANOPY. EMBEDS TO REMAIN.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: CANOPY ENLARGED VIEWS

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:36 AM

Checked: B.I.

Drawn: D.R.W.

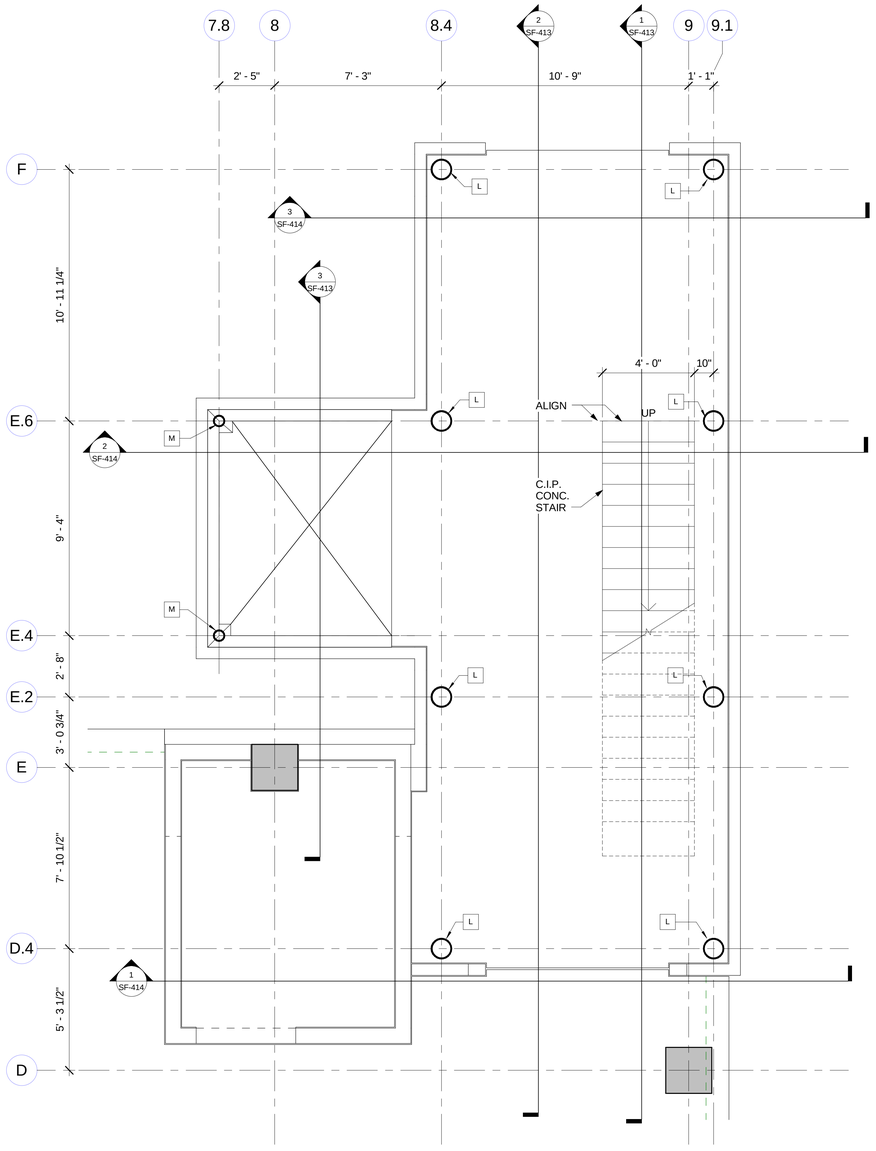
Project Number: 11159.00

Building Number:

Drawing Number: **SF-401**

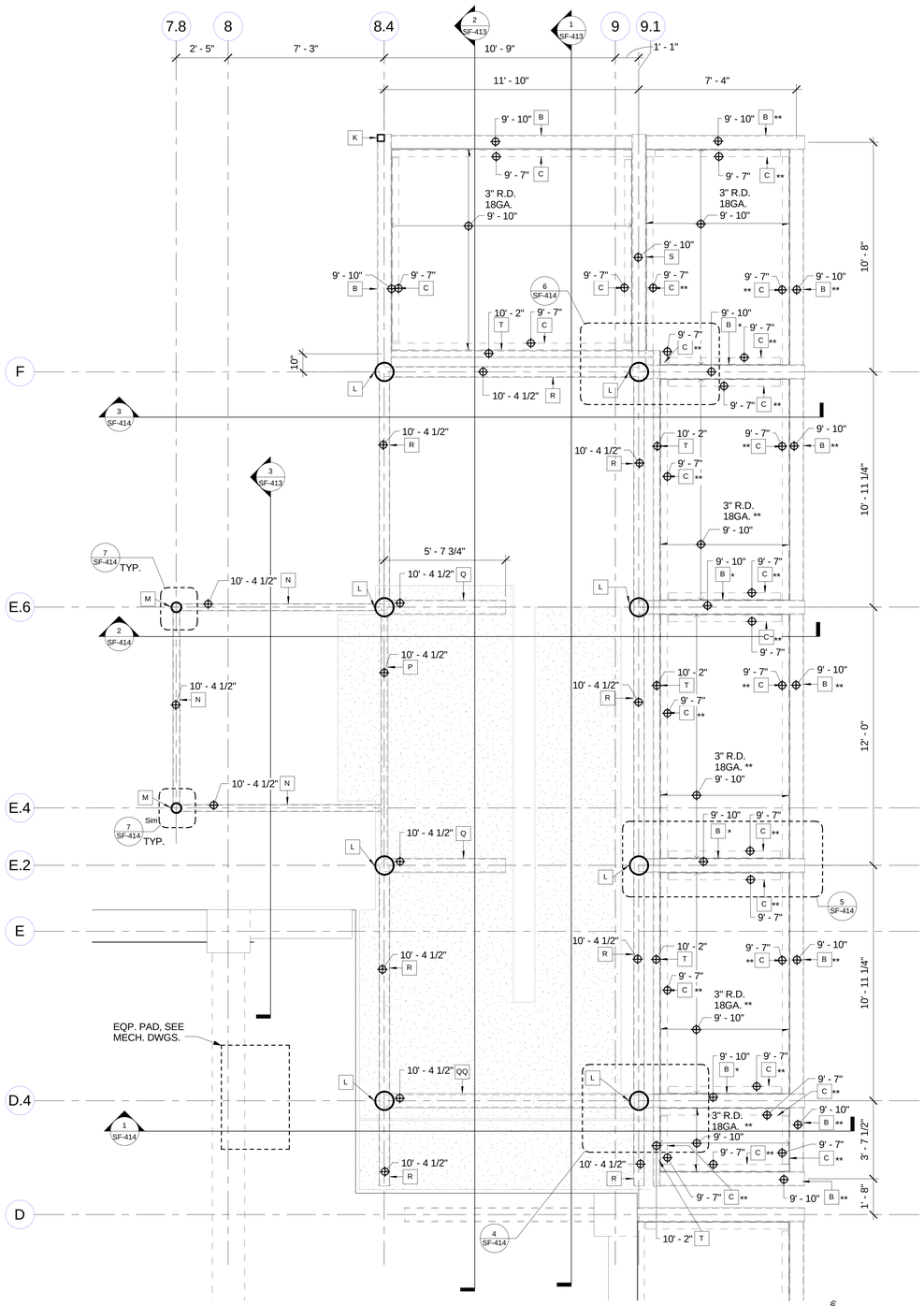
Office of Construction and Facilities Management

Department of Veterans Affairs



1 ELEVATOR / STAIR 1 LEVEL 1 FRAMING PLAN

3/8" = 1'-0"



SEE NOTE 3.

2 ELEVATOR / STAIR 1 LEVEL 2 FRAMING PLAN

3/8" = 1'-0"

NOTE:
SEE DRAWING 1/SF-412 FOR CONC. DIMENSIONS AND REINFORCING.

NOTES:

1. SEE SB-SERIES DRAWINGS FOR STEEL COLUMN BASE PLATE INFORMATION.
2. ELEVATIONS THIS SHEET ARE TOP OF STEEL, U.N.O.
3. DEDUCT ALTERNATE 8: OMIT EAST CANOPY. STEEL MEMBERS TO TERMINATE @ EAST FACE OF "I" ARE DESIGNATED " * ". STEEL MEMBERS TO BE OMITTED ARE DESIGNATED " ** ".

LEGEND

- —— = REBAR
- 1 = #5 @ 12" O.C. T&B
- 2 = #4 @ 12" O.C. TEMP. REBAR
- 3 = #4 @ 12" O.C. T & B
- 4 = #4 NOSING BARS
- 5 = #5 @ 12" O.C.
- 6 = #6 @ 6" O.C.
- 7 = 3/4" DIA. 6" STUDS @ 12" O.C.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: ELEVATOR/STAIR 1 FRAMING ENLARGED VIEWS - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:40 AM

Checked: B.I.

Drawn: D.R.W.

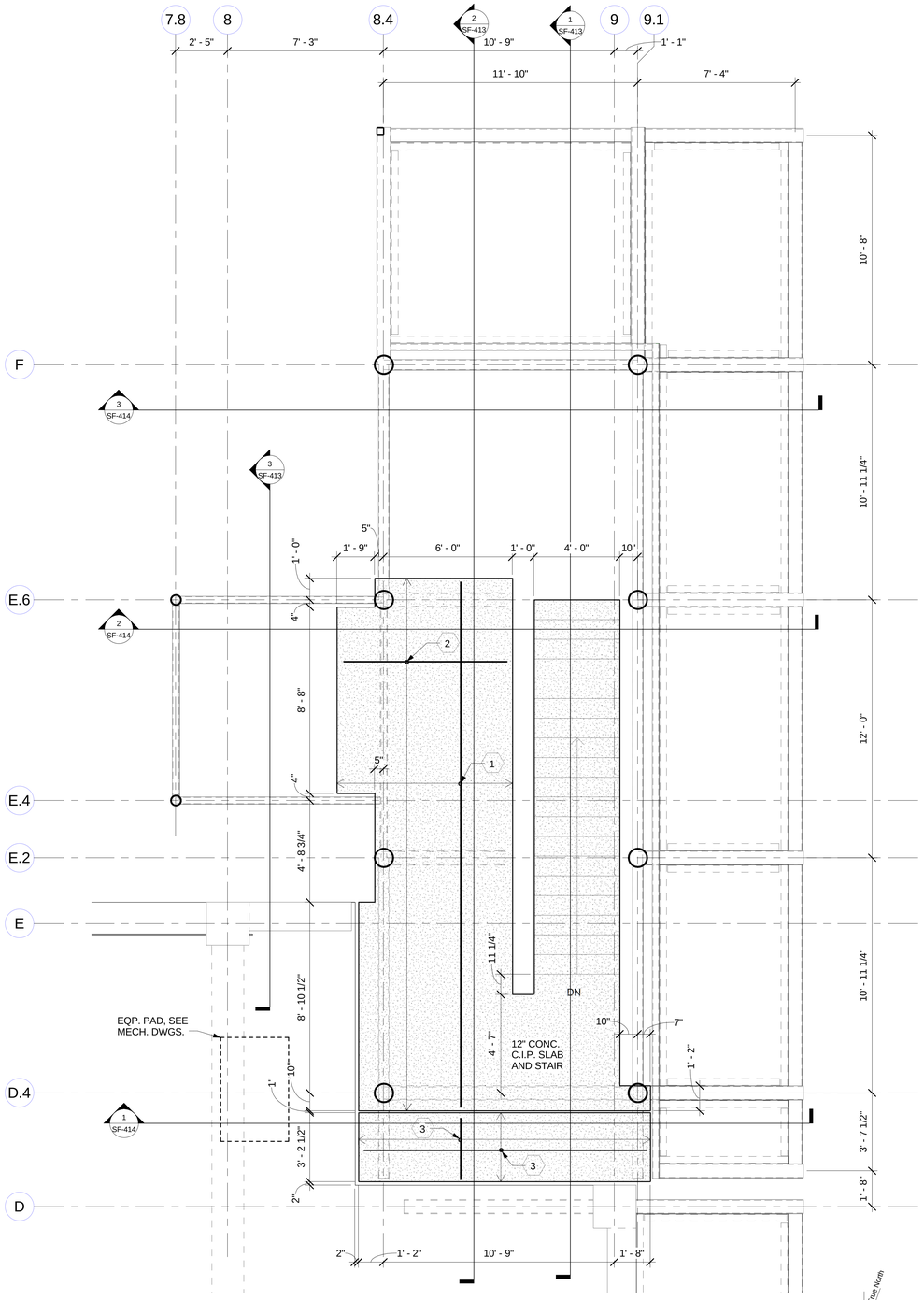
Project Number: 11159.00

Building Number:

Drawing Number: SF-411

Office of Construction and Facilities Management

Department of Veterans Affairs

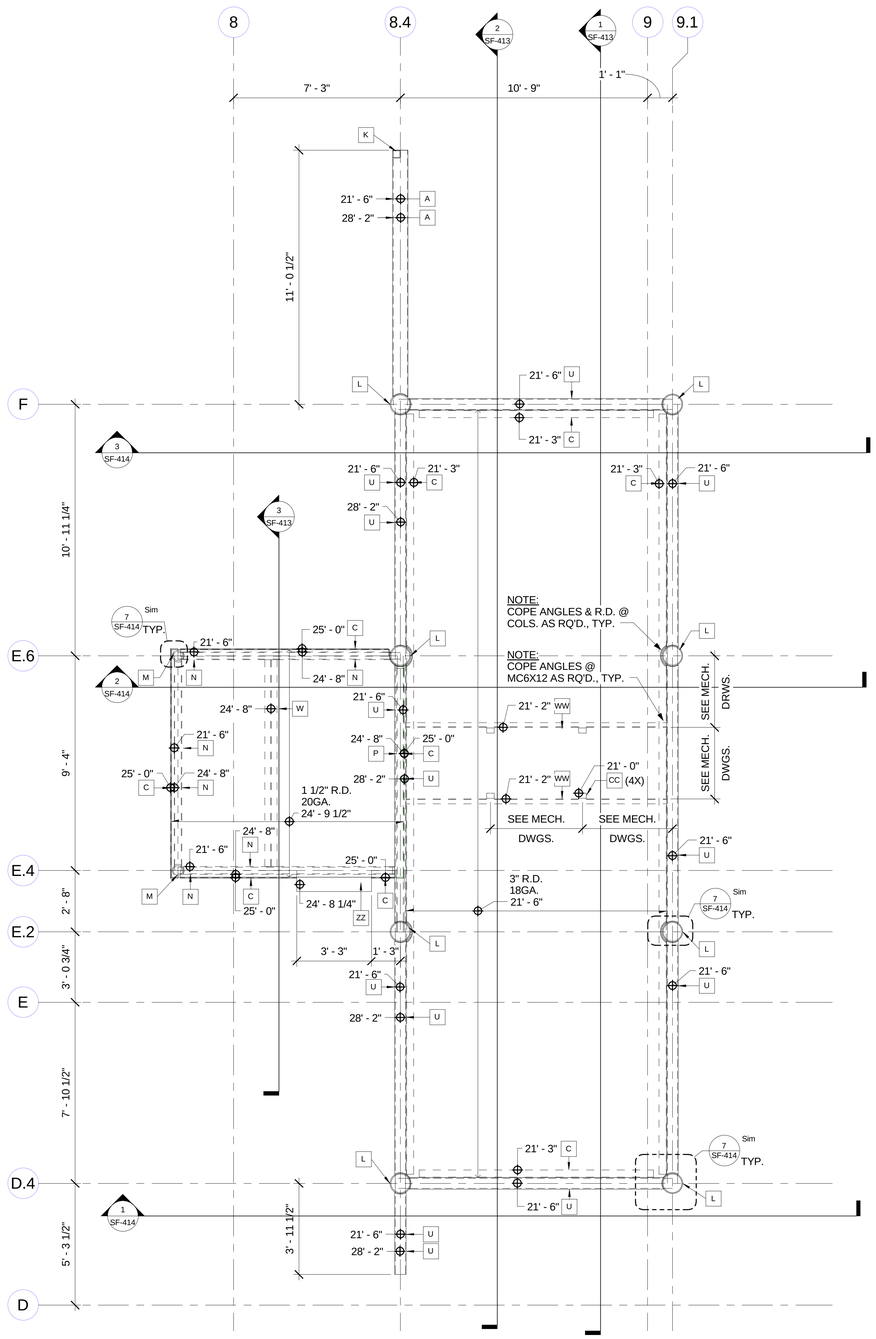


1 ELEVATOR / STAIR 1 LEVEL 2 C.I.P. CONC. PLAN

SEE NOTE 2.

3/8" = 1'-0"

NOTE:
SEE DRAWING 2/SF-411
FOR STEEL FRAMING.



2 ELEVATOR / STAIR 1 ROOF FRAMING PLAN

SEE NOTE 2.

3/8" = 1'-0"

NOTES:

1. ELEVATIONS THIS SHEET ARE TOP OF STEEL, U.N.O.
2. DEDUCT ALTERNATE 8: OMIT EAST CANOPY, EMBEDS TO REMAIN.

LEGEND

- —— = REBAR
- 1 = #5 @ 12" O.C. T&B
- 2 = #4 @ 12" O.C. TEMP. REBAR
- 3 = #4 @ 12" O.C. T & B
- 4 = #4 NOSING BARS
- 5 = #5 @ 12" O.C.
- 6 = #6 @ 6" O.C.
- 7 = 3/4" DIA. 6" STUDS @ 12" O.C.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

Westlake Reed Leskosky

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216.522.1350

Drawing Title: ELEVATOR/STAIR 1 FRAMING ENLARGED VIEWS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:44 AM

Checked: B.I.

Drawn: D.R.W.

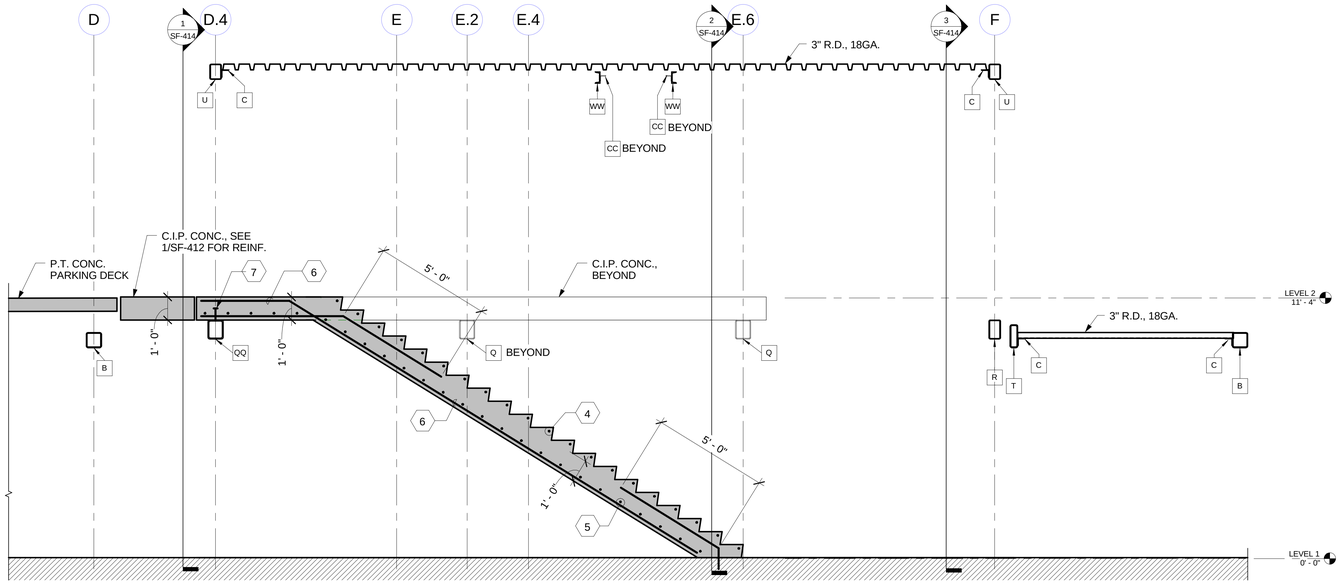
Project Number: 11159.00

Building Number:

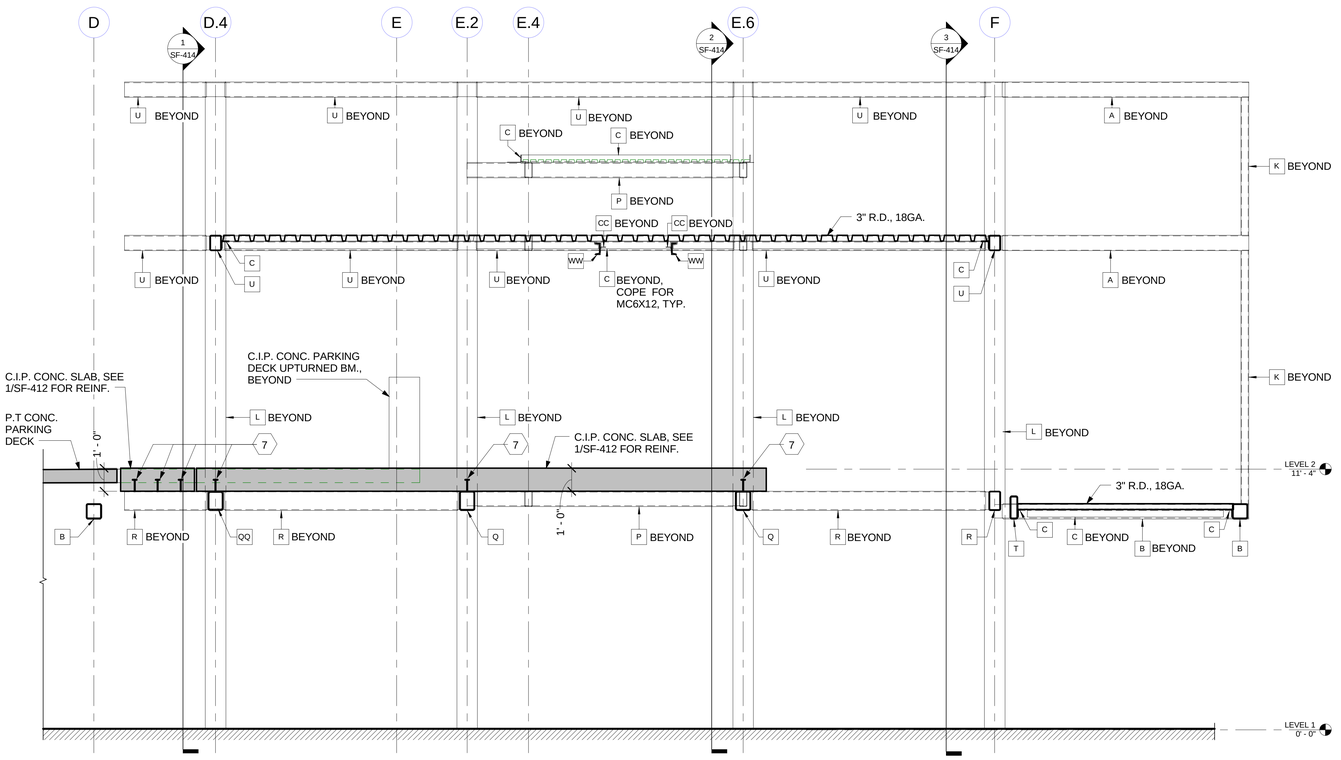
Drawing Number: **SF-412**

Office of Construction and Facilities Management

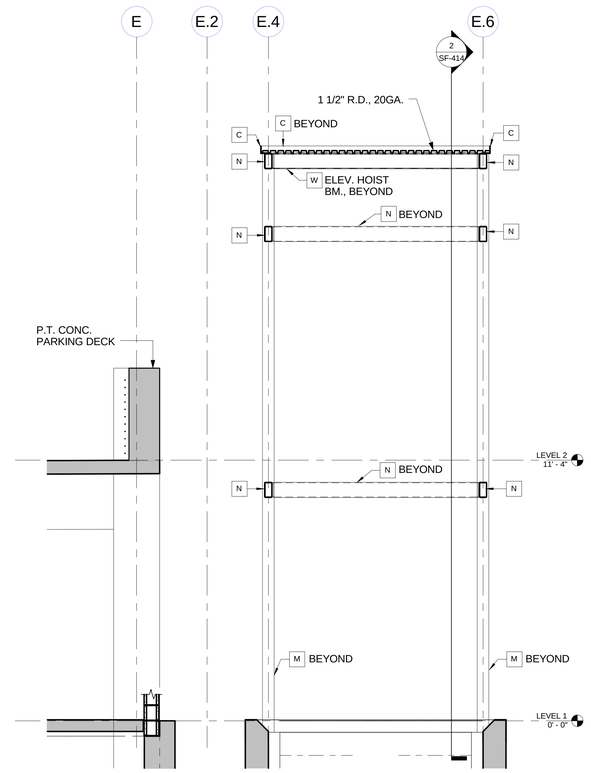
Department of Veterans Affairs



1 STAIR 1 FRAMING SECTION 1
3/8" = 1'-0"



2 STAIR 1 FRAMING SECTION 2
3/8" = 1'-0"



3 ELEVATOR FRAMING SECTION
3/8" = 1'-0"

NOTE:

1. SEE SF-411 & SF-412 FOR TOP OF STEEL ELEV.
2. FRAMING MEMBERS "BEHIND" ARE NOT KEYNOTED FOR CLARITY.

LEGEND

- —— = REBAR
- 1 = #5 @ 12" O.C. T&B
- 2 = #4 @ 12" O.C. TEMP. REBAR
- 3 = #4 @ 12" O.C. T & B
- 4 = #4 NOSING BARS
- 5 = #5 @ 12" O.C.
- 6 = #6 @ 6" O.C.
- 7 = 3/4" DIA. 6" STUDS @ 12" O.C.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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ARCHITECT/ ENGINEERS

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Drawing Title: ELEVATOR/STAIR 1 FRAMING ENLARGED VIEWS - 3

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:46 AM

Checked: B.I.

Drawn: D.R.W.

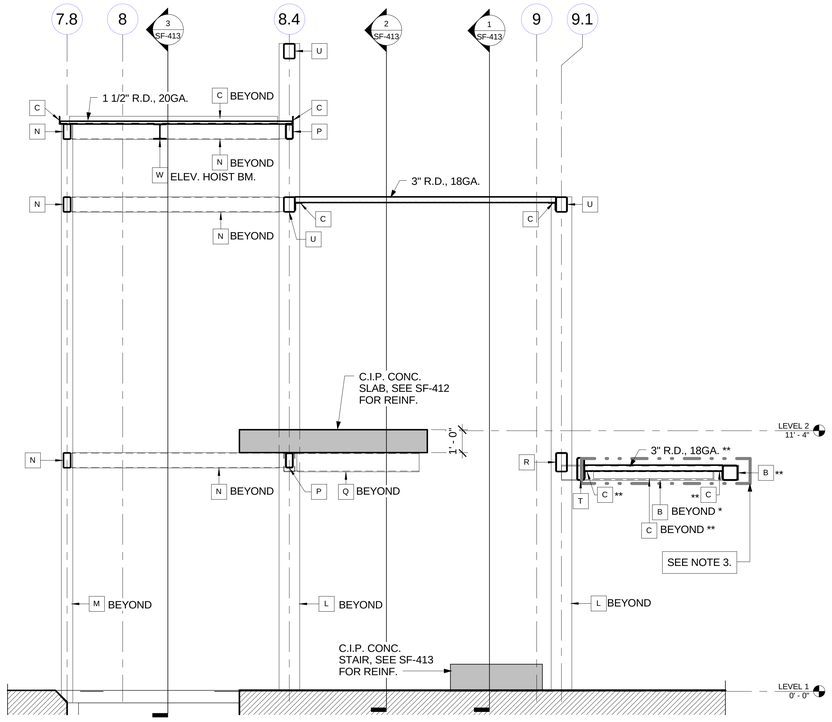
Project Number: 11159.00

Building Number:

Drawing Number: **SF-413**

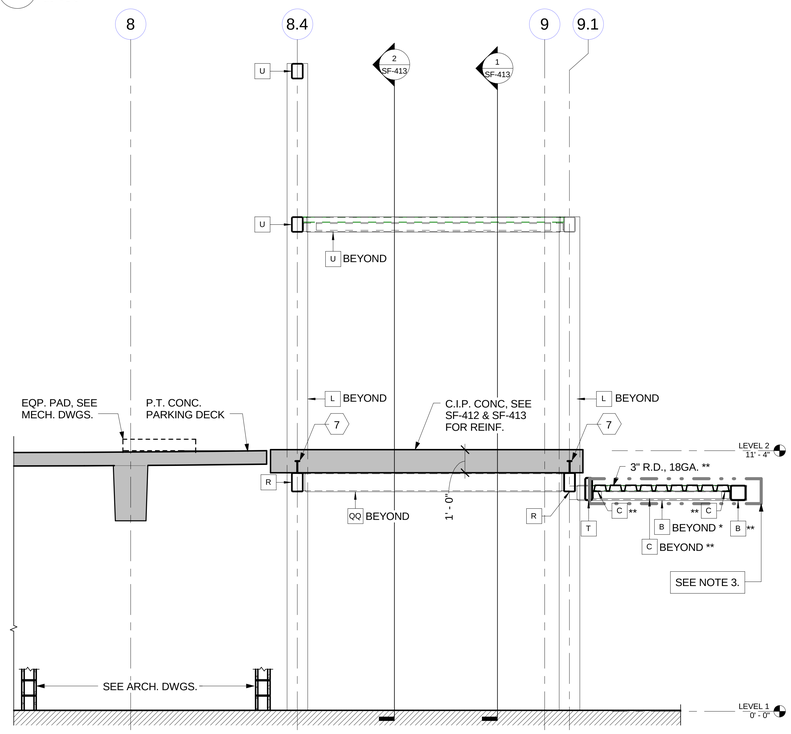
Office of Construction and Facilities Management

Department of Veterans Affairs



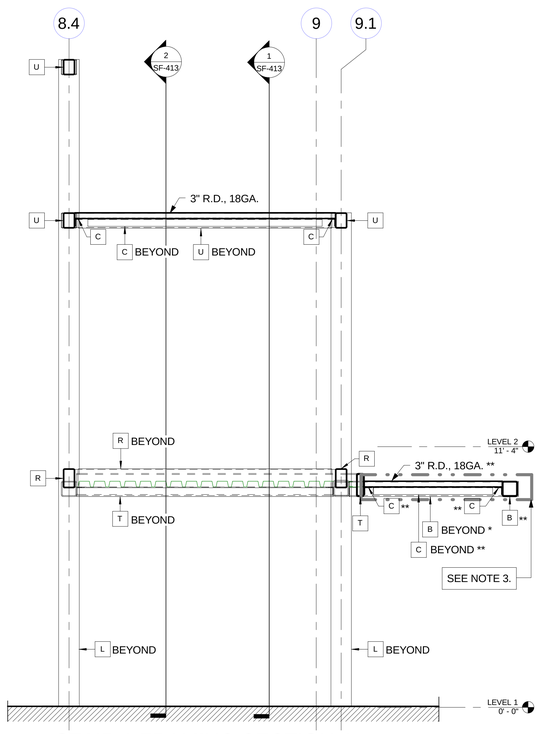
2 ELEVATOR / STAIR 1 FRAMING SECTION

3/8" = 1'-0"



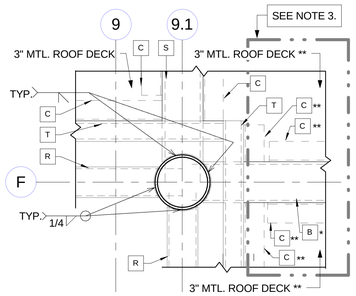
1 STAIR 1 FRAMING SECTION 3

3/8" = 1'-0"



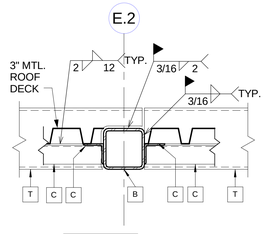
3 STAIR 1 FRAMING SECTION 4

3/8" = 1'-0"



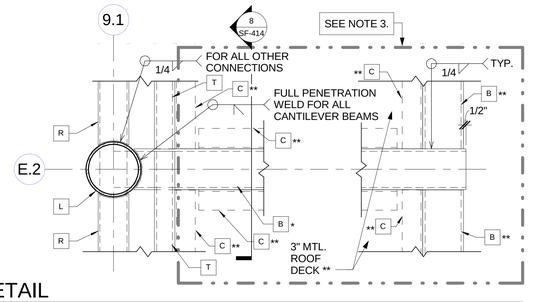
6 DETAIL

1" = 1'-0"



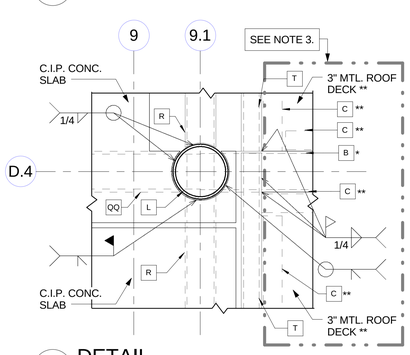
TYP. HSS12X4 TO HSS8X8 DETAIL

8 1" = 1'-0"



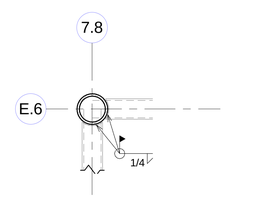
5 DETAIL

1" = 1'-0"



4 DETAIL

1" = 1'-0"



TYPICAL BEAM COLUMN CONNECTION

7 1" = 1'-0"

NOTE:

1. SEE SF-411 & SF-412 FOR TOP OF STEEL ELEVATIONS.
2. FRAMING MEMBERS "BEHIND" ARE NOTE KEYNOTED FOR CLARITY.
3. DEDUCT ALTERNATE 8: OMIT EAST CANOPY. STEEL MEMBERS TO TERMINATE @ EAST FACE OF "T" ARE DESIGNATED " * ". STEEL MEMBERS TO BE OMITTED ARE DESIGNATED " ** ".

LEGEND

- —— = REBAR
- (1) = #5 @ 12" O.C. T&B
- (2) = #4 @ 12" O.C. TEMP. REBAR
- (3) = #4 @ 12" O.C. T & B
- (4) = #4 NOSING BARS
- (5) = #5 @ 12" O.C.
- (6) = #6 @ 6" O.C.
- (7) = 3/4" DIA. 6" STUDS @ 12" O.C.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: ELEVATOR/STAIR 1 ENLARGED VIEWS - 4

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:51 AM

Checked: B.I.

Drawn: D.R.W.

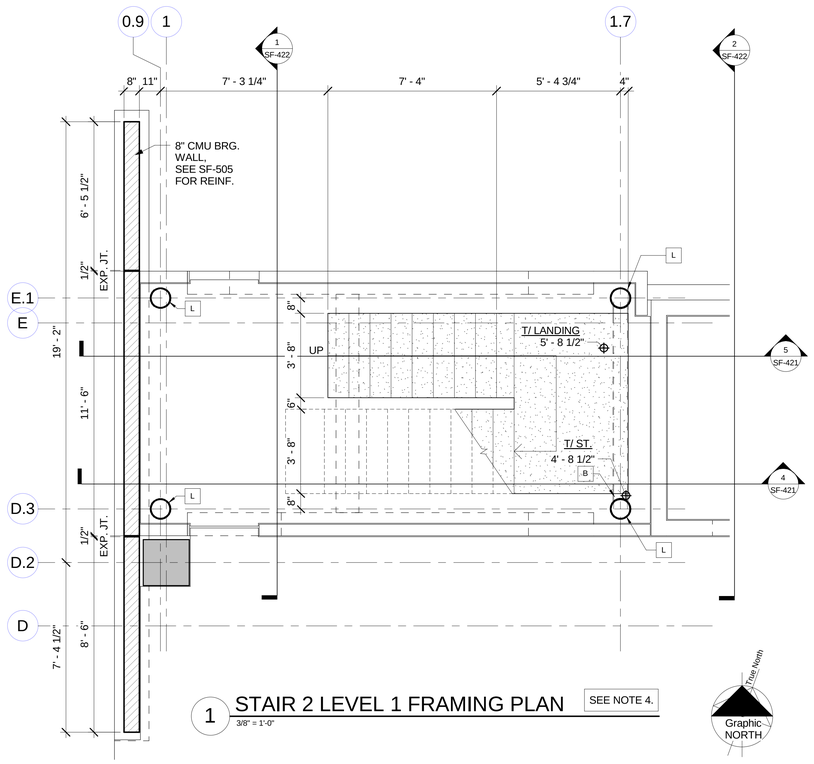
Project Number: 11159.00

Building Number:

Drawing Number: **SF-414**

Office of Construction and Facilities Management

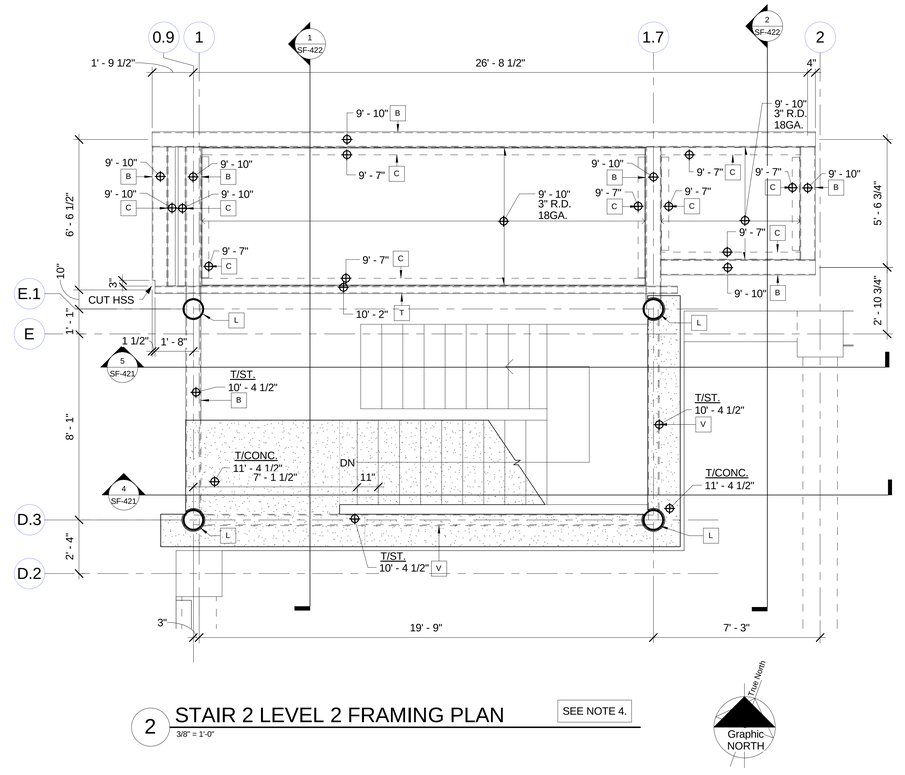
Department of Veterans Affairs



1 STAIR 2 LEVEL 1 FRAMING PLAN

3/8" = 1'-0"

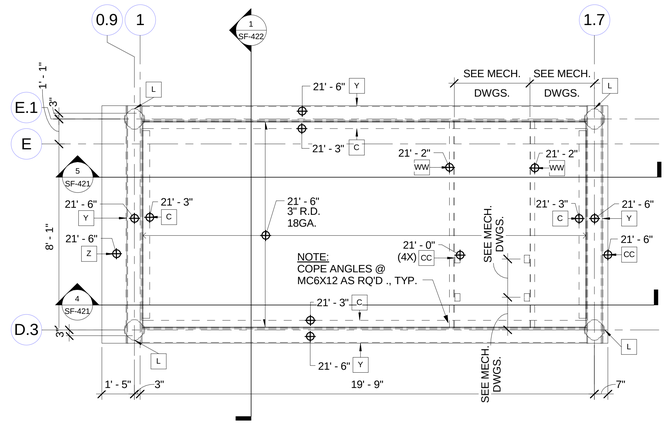
SEE NOTE 4.



2 STAIR 2 LEVEL 2 FRAMING PLAN

3/8" = 1'-0"

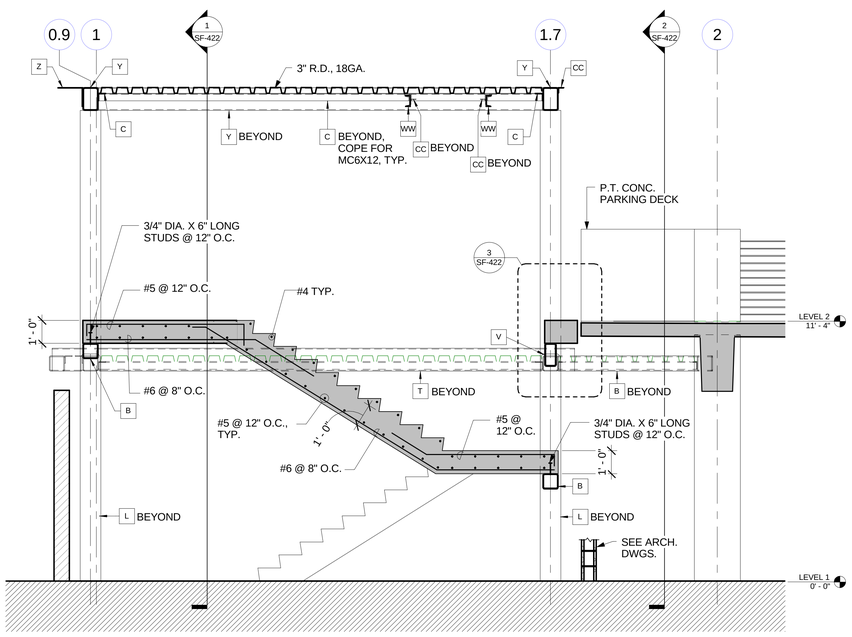
SEE NOTE 4.



SEE NOTE 4.

3 STAIR 2 ROOF FRAMING PLAN

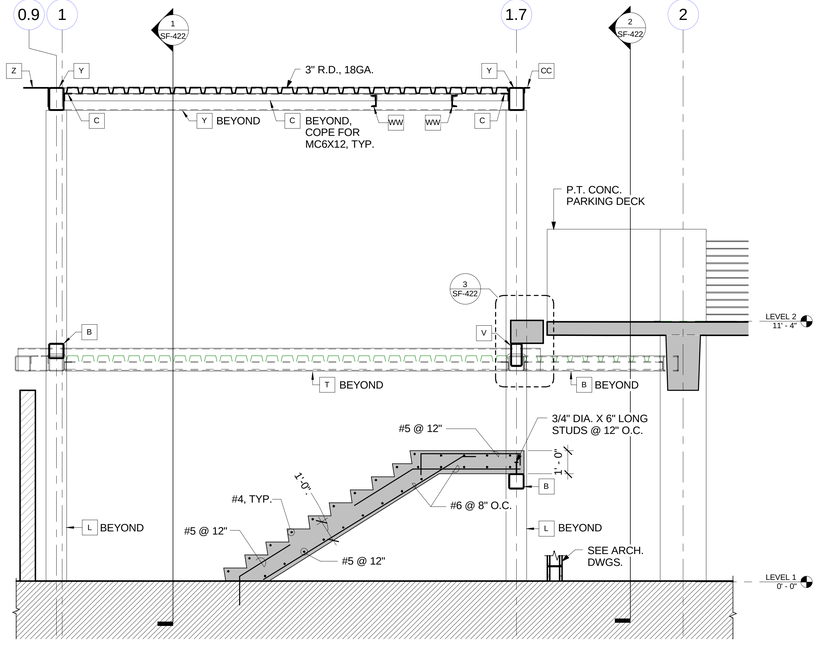
3/8" = 1'-0"



4 STAIR 2 FRAMING SECTION 1

3/8" = 1'-0"

SEE NOTE 4.



5 STAIR 2 FRAMING SECTION 2

3/8" = 1'-0"

SEE NOTE 4.

NOTES:

1. SEE SB-SERIES DRAWINGS FOR STEEL COLUMN BASE PLATE INFORMATION.
2. ELEVATIONS THIS SHEET ARE TOP OF STEEL, U.N.O.
3. FOR STAIR 2 STEEL TO STEEL CONNECTIONS PROVIDE CONNECTIONS SIMILAR TO STAIR 1.
4. DEDUCT ALTERNATE 10: OMIT STAIR 2 & ASSOCIATED CANOPY & ENCLOSURE STRUCTURE. ADD TYP. CRASH WALL @ LEVEL 2 E.O.S., SEE DET. 15 & 16/SF-503.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: 3/8" = 1'-0"

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: STAIR 2 FRAMING ENLARGED VIEWS - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:53 AM

Checked: B.I.

Drawn: D.R.W.

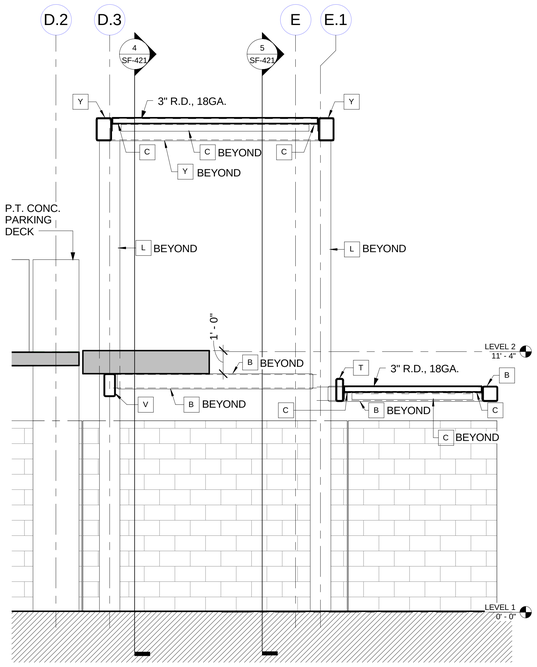
Project Number: 11159.00

Building Number:

Drawing Number: **SF-421**

Office of Construction and Facilities Management

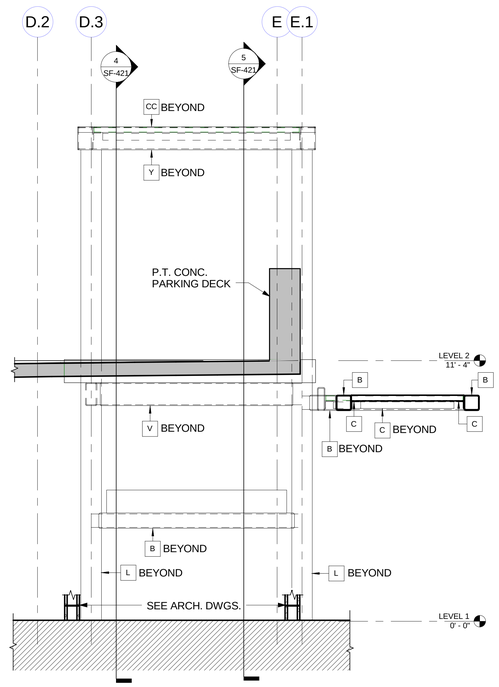
Department of Veterans Affairs



1 STAIR 2 FRAMING SECTION 3

3/8" = 1'-0"

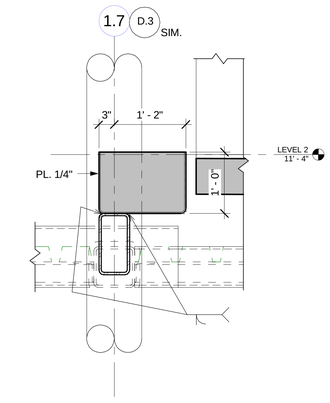
SEE NOTE 3.



2 STAIR 2 FRAMING SECTION 4

3/8" = 1'-0"

SEE NOTE 3.



SEE NOTE 3.

3 STAIR 2 CURB DETAIL

1" = 1'-0"

NOTE:

1. ELEVATIONS THIS SHEET ARE TOP OF STEEL, U.N.O.
2. FRAMING MEMBERS "BEHIND" ARE NOTE KEYNOTED FOR CLARITY.
3. DEDUCT ALTERNATE 10: OMIT STAIR 2 & ASSOCIATED CANOPY & ENCLOSURE STRUCTURE. ADD TYP. CRASH WALL @ LEVEL 2 E.O.S., SEE DET. 15 & 16/SF-503.

STEEL FRAMING MEMBERS	
A	HSS 8x8x5/16
B	HSS 8x8x1/2
C	L 4x4x5/16
CC	L 3x3x5/16
D	L 6x4x5/16
E	HSS 4x4x5/16
F	HSS 20x8x1/2 (HORIZ.)
G	6" DIA. DBL EXTRA STRONG PIPE
H	HSS1 16x8x3/8
J	6" DIA. EXTRA STRONG PIPE
K	HSS 4x4x1/4
L	HSS 10.750x0.500
M	HSS 6x0.500
N	HSS 8x4x5/16
P	HSS 8x4x1/2
Q	HSS 10x8x1/2
QQ	HSS 10x8x5/8
R	HSS 10x6x3/8
S	HSS 8x8x5/8
T	HSS 12x4x1/2
U	HSS 8x6x3/8
V	HSS 12x6x1/2
W	W 8x24 (HOIST BEAM)
WW	MCC 6X12
Y	HSS 12x8x1/2
Z	BENT PL 20"x10'-4"x3/8"
ZZ	FLAT PL 39"x11"x1/4"

FINAL SUBMISSION

Scale: As indicated

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	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: STAIR 2 ENLARGED FRAMING VIEWS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:55 AM

Checked: B.I.

Drawn: D.R.W.

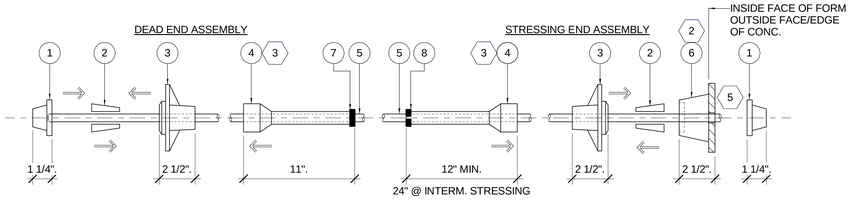
Project Number: 11159.00

Building Number:

Drawing Number: **SF-422**

Office of Construction and Facilities Management

Department of Veterans Affairs

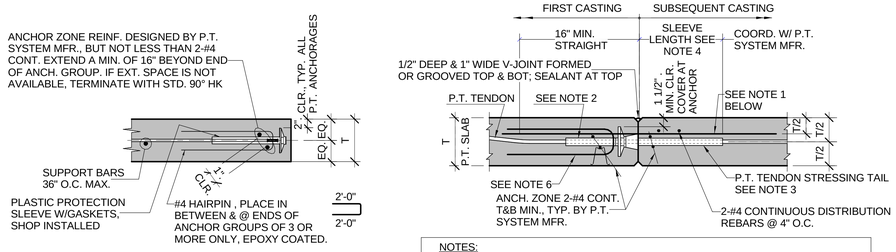


#	DESCRIPTION	REMARKS
1	END CAP	IF FABRICATED AT SHOP, WEDGES, CAP, AND SLEEVE WILL BE ASSEMBLED TIGHT TO ANCHOR
2	MONOWEDGES	
3	ANCHORAGE	
4	PROTECTION SLEEVE	APPLY ADDITIONAL P.T. GREASE PRIOR TO SLIDING SLEEVE
5	TENDON	GREASED AND SHEATHED STRAND
6	GROMMET	PLASTIC POCKET FORMER
7	SEALING GASKET	SHOP INSTALLED RUBBER PLUG
8	SPLIT SEALING GASKET	FIELD INSTALLED RUBBER PLUG
9	STRAND	UNSHEATHED GREASED STRAND IN PROTECTION SLEEVE

ASSEMBLY NOTES

1. LOCATE ANCHOR AT BULKHEAD PER PROJECT PLANS.
2. FOR STRESSING END TENDONS: INSTALL GROMMET FLUSH BETWEEN BULKHEAD AND ANCHOR FOR TIGHT SEAL.
3. APPLY ADDITIONAL PT GREASE, THEN SLIDE PROTECTION SLEEVE TIGHT AGAINST ANCHOR, LEAVE NO BARE STRAND EXPOSED, TAPE IF NECESSARY.
4. AFTER CONCRETE PLACEMENT, AT TIME OF STRESSING, REMOVE GROMMET AND INSERT WEDGES.
5. AFTER STRESSING, CUT STRAND TO WITHIN 1/8" OF END CAP.
6. GREASE END CAP AND INSERT TIGHT AGAINST ANCHOR.
7. PATCH STRESSING POCKET PER PROJECT REQUIREMENTS.

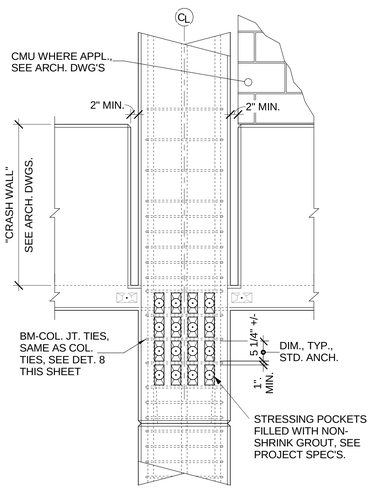
1 FULLY ENCAPSULED POST-TENSIONING SYSTEM COMPONENTS
N.T.S.



NOTES:

1. PLACE #4 x 4'-0" LONG REINF. BAR @ 2'-0" O.C. THROUGH CONSTR. JOINT LEVEL WITH PT TENDONS, CENTERED ON JOINT.
2. APPLY ADDITIONAL PT GREASE THEN SLIDE AND SEAL PROTECTIVE SLEEVE OVER EXPOSED STRAND PRIOR TO CONCRETING. AFTER CONCRETE PLACEMENT, JUST EXPOSED STRAND PRIOR TO CONCRETING. AFTER CONCRETE PLACEMENT, JUST
3. APPLY PT GREASE INSIDE SLEEVE THEN SLIDE AND SEAL PROTECTIVE SLEEVE OVER EXPOSED STRAND AFTER STRESSING.
4. SLEEVE LENGTH = ELONGATION AT INTERMEDIATE STRESSING END PLUS 12" MIN.
5. IF SUBSEQUENT POUR IS DELAYED MORE THAN 14 DAYS, CONSULT SEoR FOR ADDITIONAL REBAR REQUIREMENTS.
6. FOR #4 HAIRPINS, SEE DETAIL 5 & 7 THIS SHEET.

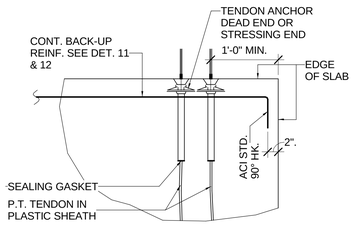
5 TYP. DEAD END ANCHOR DETAIL
N.T.S.



6 CONSTRUCTION JOINT WITH INTERMEDIATE STRESSING
N.T.S.

NOTES:

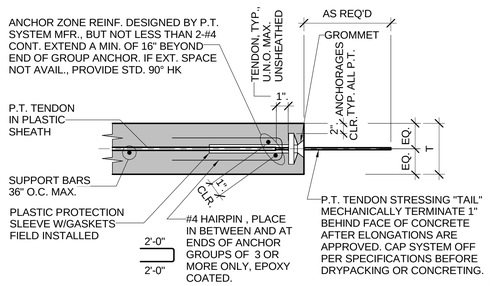
1. SLAB MILE STEEL REINFORCEMENT OTHER THAN ANCHORAGE ZONE REBAR, NOT SHOWN FOR BREVITY.
2. ANCHORAGE HAIRPINS NOT SHOWN SEE DETAILS 5 THRU 7 THIS SHEET FOR APPLICABILITY.



9 TYP. GARAGE BEAM-COLUMN EXTERIOR JOINT
N.T.S.

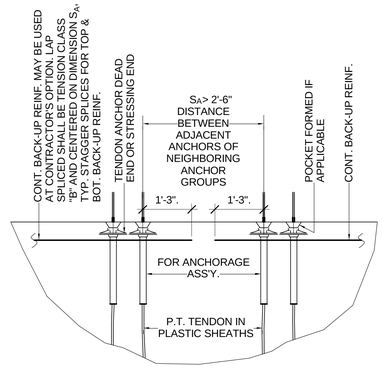
10 TYP. P.T. SLAB ANCHORAGE PLAN DETAIL AT CORNERS
N.T.S.

2 NOT USED

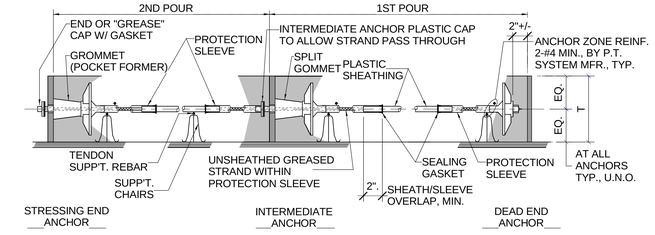


7 TYP. STRESSING END ANCHOR DETAIL
N.T.S.

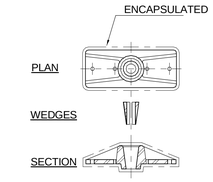
11 TYP. P.T. SLAB ANCHORAGE PLAN DETAIL WITH CLOSE SPACING OF ANCHORS
N.T.S.



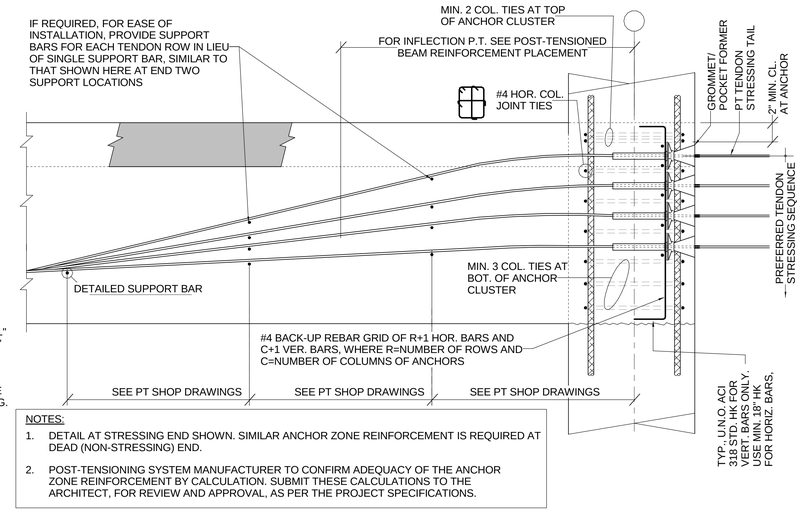
12 TYP. P.T. SLAB ANCHORAGE PLAN DETAIL WITH WIDE SPACING OF ANCHORS
N.T.S.



3 UNIFORMLY SPACED TENDONS IN CORROSIVE ENVIRONMENT
N.T.S.



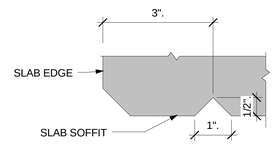
4 TYP. MONOSTRAND ANCHOR CASTING
N.T.S.



NOTES:

1. DETAIL AT STRESSING END SHOWN. SIMILAR ANCHOR ZONE REINFORCEMENT IS REQUIRED AT DEAD (NON-STRESSING) END.
2. POST-TENSIONING SYSTEM MANUFACTURER TO CONFIRM ADEQUACY OF THE ANCHOR ZONE REINFORCEMENT BY CALCULATION. SUBMIT THESE CALCULATIONS TO THE ARCHITECT, FOR REVIEW AND APPROVAL, AS PER THE PROJECT SPECIFICATIONS.

8 ANCHORAGE ZONE REINFORCEMENT IN BEAMS
N.T.S.



NOTE:
PROVIDE DRIP THUS @ ALL SLAB EDGES, U.N.O.

13 "DRIP" TYP. DETAIL
N.T.S.

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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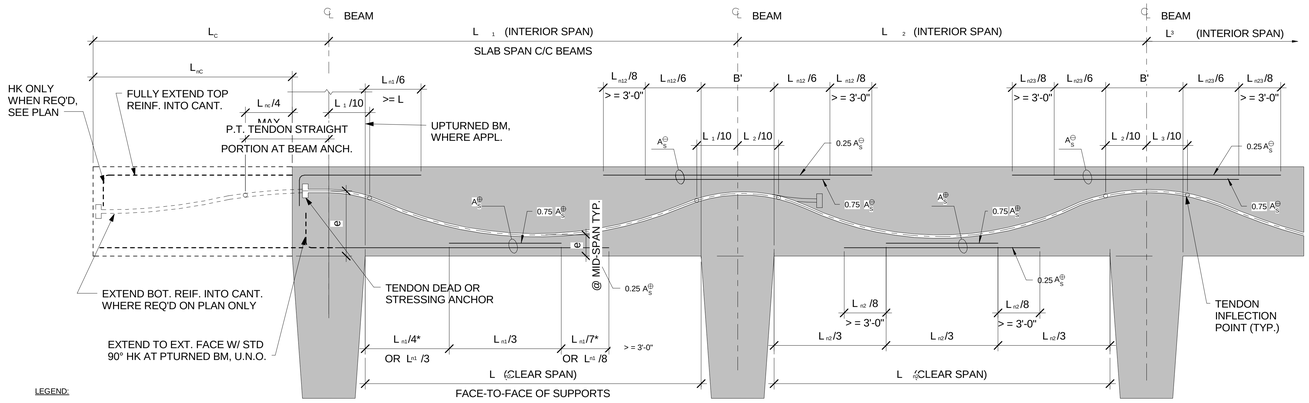
Drawing Title: TYPICAL POST-TENSIONING DETAILS - 1	Project Title: VA Erie Parking Structure	Project Number: 11159.00	Office of Construction and Facilities Management
Approved: J.H.	Location: Erie, PA	Building Number	
	Date: 9/19/2013 10:49:56 AM / Checked: B.I. / Drawn: D.R.W.	Drawing Number: SF-501	Department of Veterans Affairs

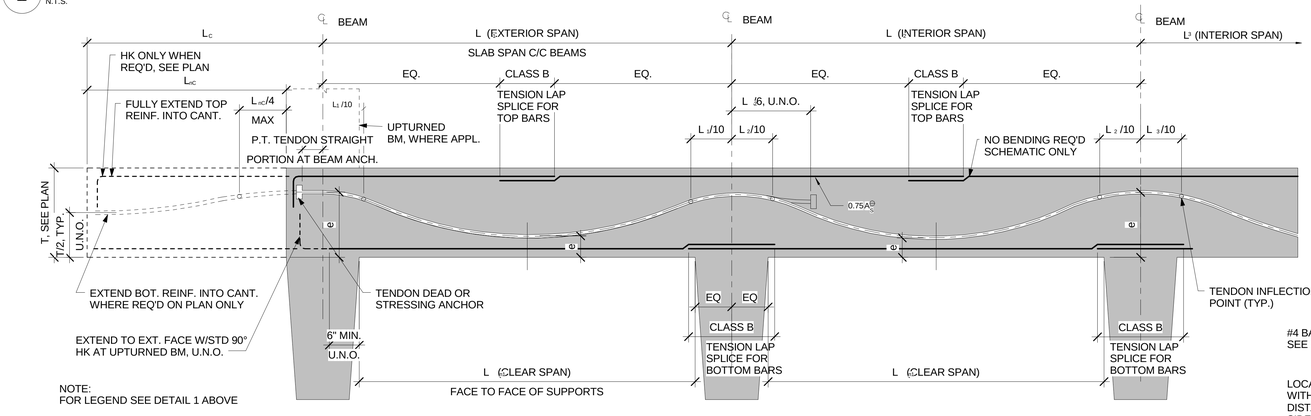


LEGEND:

e = TENDON ORDINATE, MEASURED FROM BOTTOM OF SLAB, SEE PLAN
* = FOR EXTERIOR SPAN ONLY WHEN L <=L /5
L n12 = LARGER OF L & L
L n23 = LARGER OF L & L
A S⊕ = POSITIVE (BOTTOM) REINFORCEMENT, SEE PLAN
A S⊖ = NEGATIVE (TOP) REINFORCEMENT, SEE PLAN

1 SHORT BAR BETWEEN CONT. BARS PLACEMENT DIAGRAM (U.N.O.) ONE-WAY SLAB

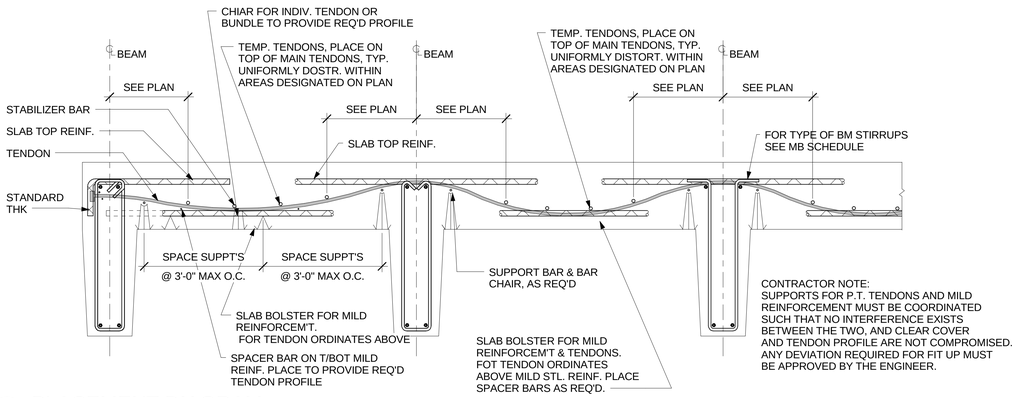
N.T.S.



NOTE:
FOR LEGEND SEE DETAIL 1 ABOVE

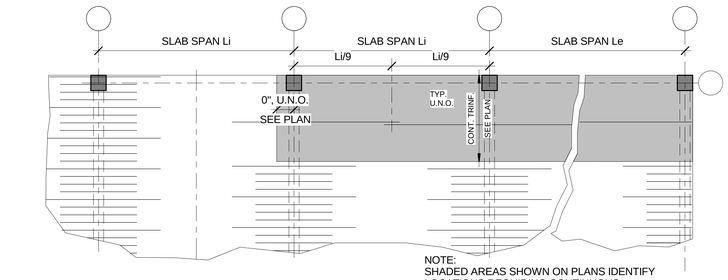
2 LONG (CONTINUOUS) BAR PLACEMENT DIAGRAM (U.N.O.) POST-TENSIONED ONE-WAY SLAB TENDON & MILD REINF.

N.T.S.



3 PLACEMENT DIAGRAM

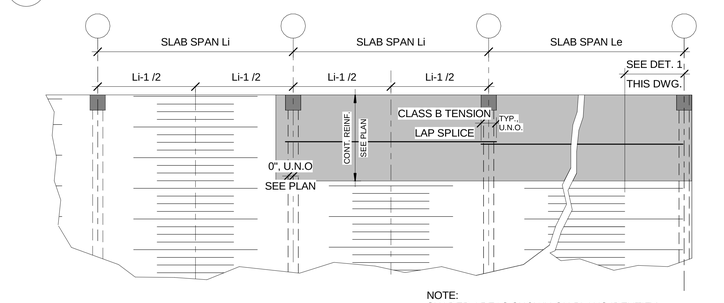
N.T.S.



NOTE:
SHADED AREAS SHOWN ON PLANS IDENTIFY LOCATIONS REQUIRING CONTINUOUS REINFORCEMENT.

4 TYPICAL SLAB TOP BAR ARRANGEMENT PLAN VIEW

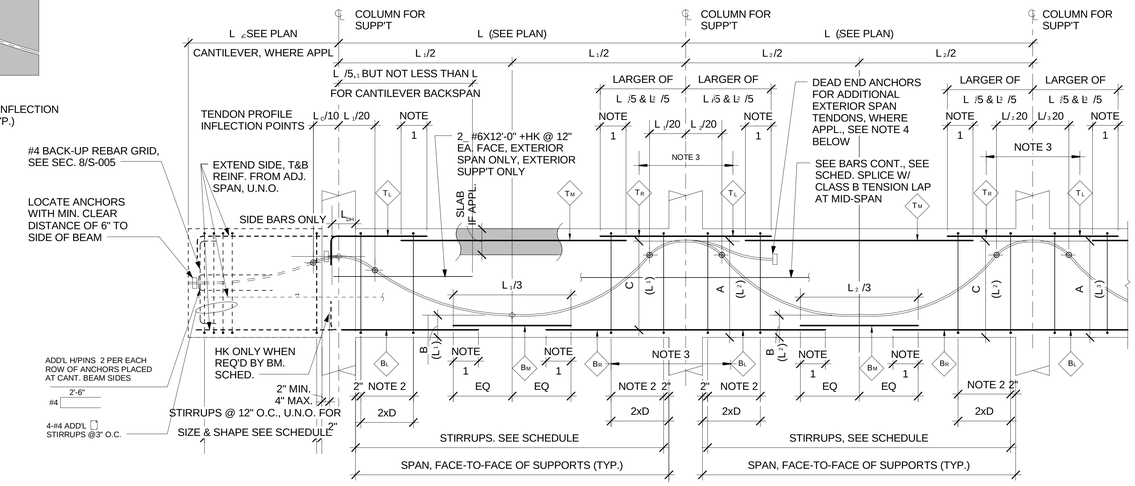
N.T.S.



NOTE:
SHADED AREAS SHOWN ON PLANS IDENTIFY LOCATIONS REQUIRING CONTINUOUS REINFORCEMENT.

5 TYPICAL SLAB BOTTOM BAR ARRANGEMENT PLAN VIEW

N.T.S.



NOTES:
1. AT LOCATIONS REFERRED TO THIS NOTE, PROVIDE ACI 318 CLASS B TENSION LAP SPLICE BASED ON SMALLER DIAMETER OF BARS BEING SPLICES, SEE DWG S-001.
2. FOR INTERMEDIATE AND SPECIAL MOMENT FRAMES ONLY, AS DEFINED IN THE DESIGN CRITERIA FOR THE PROJECT ON DRAWING S001, WITHIN SPACE INDICATED PROVIDE HOOPS OF SIZE AND SPACING PER BEAM SCHEDULE. CLOSED STIRRUPS CONSISTING OF ACI STANDARD TYPE S3 U-STIRRUP CAPPED WITH TYPE T9 TIES AND ALTERNATING 135° AND 90° SEISMIC HOOKS SHALL BE PERMITTED
3. WHEN TOP OR BOTTOM BARS EXTEND THROUGH JOINT, THEY ARE CALLED OUT ON THE SCHEDULE ONLY ONCE, FROM EITHER SIDE UNLESS ADDITIONAL BARS ARE TO BE INSTALLED AND PROPERLY DEVELOPED BEYOND RESPECTIVE FACE OF SUPPORT.
4. WHERE REQUIRED BY SCHEDULE, PROVIDE ADDITIONAL EXTERIOR SPAN TENDONS ANCHORED AT L /6 OF THE ADJACENT SPAN NEAREST COMMON SUPPORT. PLACE DEAD END ANCHORS AT C.G.S. OF THE TENDON GROUP PROFILE.

MILD STEEL REINF. LEGEND

T L = TOP LEFT
T M = TOP MIDDLE
T R = TOP MIDDLE
B L = BOTTOM LEFT
B M = BOTTOM MIDDLE
B R = BOTTOM RIGHT

TENDON GROP PROFILE LEGEND

= TENDON PROFILE INFLECTIO POINT
= TENDON PROFILE ORDINATE A, B, OR C. SCHEDULE (EACH END OF SPAN AND MID-SPAN)
A = TENDON GROUP C.G.S. DIMENSION. SEE SCHEDULE
(L n) = SPAN FOR WHICH C.G.S. ORDINATE IS LISTED

6 POST-TENSIONED BEAM/GIRDER REINF. PLACEMENT

N.T.S.

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: TYPICAL POST-TENSIONING DETAILS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:49:58 AM

Checked: J.H.

Drawn: D.R.W.

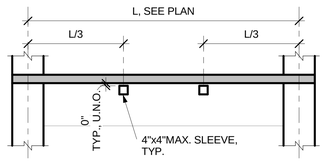
Project Number: 11159.00

Building Number:

Drawing Number: **SF-502**

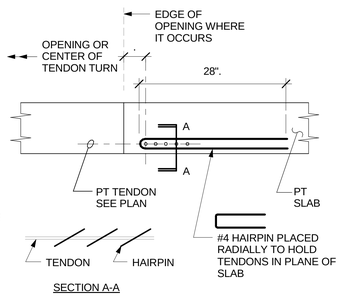
Office of Construction and Facilities Management

Department of Veterans Affairs

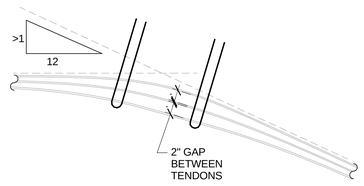


NOTES:
1. WORK WITH ELECTRICAL, PLUMBING, FIRE PROTECTION AND MECHANICAL DWGS.
2. LOCATION TO BE APPROVED BY ENGINEER.
3. NUMEROUS PENETRATIONS PLACED WITHIN CLEAR DISTANCE OF LESS THAN BEAM DEPTH ARE NOT COVERED BY THIS DETAIL. SUBMIT EXACT PLACEMENT TO THE ENGINEER FOR ANALYSIS OF ADDITIONAL REINFORCEMENT REQUIREMENTS.
4. FOR PENETRATIONS LARGER THAN 4" DIAMETER AND/OR AT OTHER LOCATIONS, CONSULT E.O.R.

1 TYPICAL BEAM WEB PENETRATIONS
N.T.S.

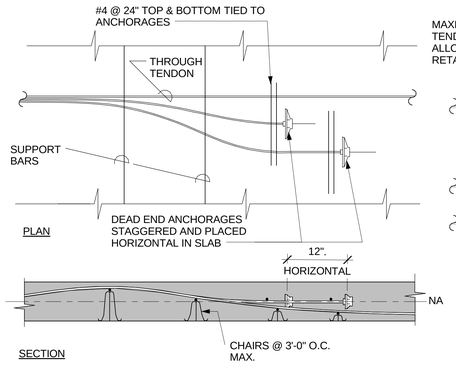


2 SECTION AT TYPICAL HAIRPIN AT TENDON TURNS
N.T.S.

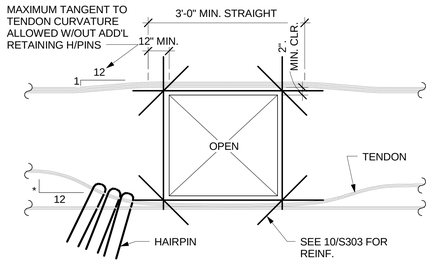


NOTE:
WHERE TENDON TURN IS GREATER THAN 1:12 1- KEEP TENDONS MIN. 2" APART AT TURN

3 TENDON PLACEMENT FOR TURNS GREATER THAN 1 TO 12
N.T.S.

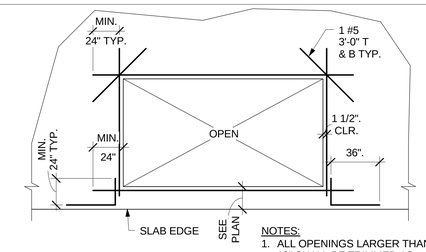


4 PLACEMENT OF ADDED TENDON
N.T.S.



* =TANGENT (IN 12") TO TENDON CURVATURE IN EXCESS OF 1" BUT NOT MORE THAN MAXIMUM PERMITTED BY THE POST-TENSIONING SYSTEM MANUFACTURER.

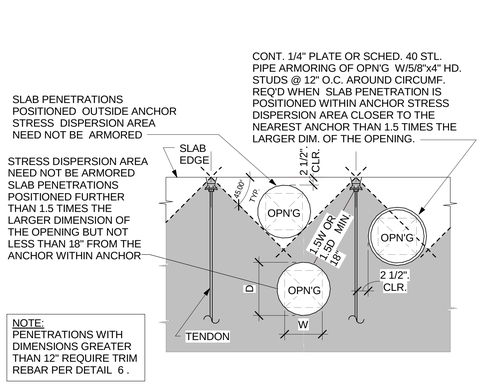
5 PLAN AT TYPICAL HAIRPIN AT TENDON TURNS
N.T.S.



MAX. DIMENSION	REINFORCING
12" TO 18"	1 #5 EA. SIDE
18" TO 2'-6"	1 #5 T & B, EA. SIDE
2'-6" & LARGER	2 #5 T & B, EA. SIDE

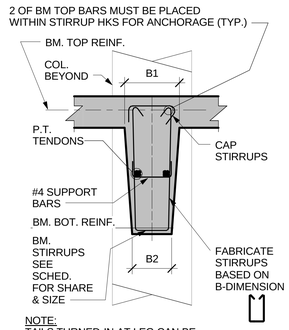
NOTES:
1. ALL OPENINGS LARGER THAN 12" SHALL BE TRIMMED AS SHOWN
2. THESE BARS ARE IN ADDITION TO REBAR SHOWN ON PLANS
3. THESE REQ'S. ARE MINIMUM UNLESS SHOWN OTHERWISE ELSEWHERE IN THESE DOCUMENTS

6 TRIM BARS FOR OPENINGS AT SLAB EDGE
N.T.S.



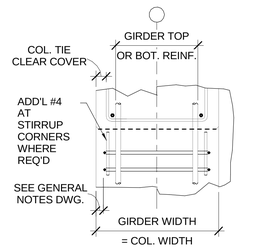
NOTE:
PENETRATIONS WITH DIMENSIONS GREATER THAN 12" REQUIRE TRIM REBAR PER DETAIL 6 .

7 OPENINGS AT P.T. ANCHORAGE
N.T.S.

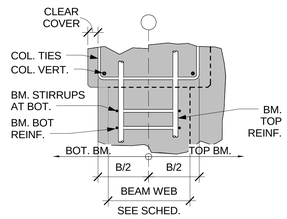


NOTE:
TAILS TURNED-IN AT LEG CAN BE TURNED-OUT PER CONTRACTOR OPT.

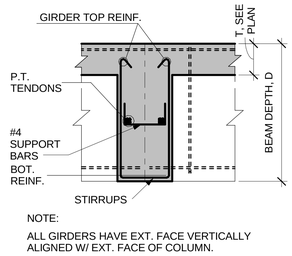
8 TYPICAL SECTION BEAM WITH LEVEL SLAB
N.T.S.



9 TYPICAL ADD'L REINF. IN BEAM-GIRDER AT COLS.
N.T.S.

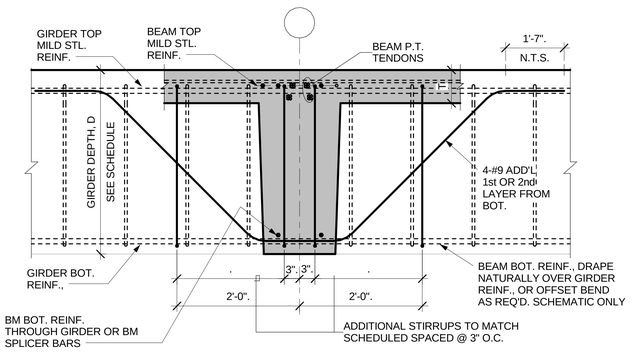


10 BAR PLACEMENT DETAIL IN BEAM-GIRDER AT COLS.
N.T.S.

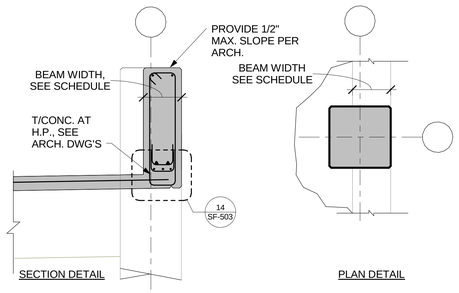


NOTE:
ALL GIRDERS HAVE EXT. FACE VERTICALLY ALIGNED W/ EXT. FACE OF COLUMN.

11 SECTION AT TYPICAL GIRDER
N.T.S.

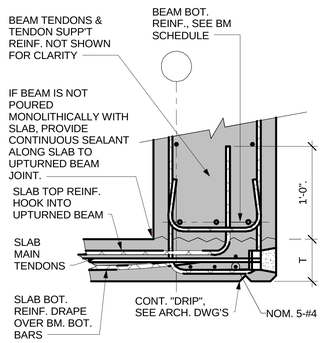


12 TYPICAL BEAM-GIRDER INTERSECTION ADDITIONAL REINFORCEMENT DETAIL
N.T.S.



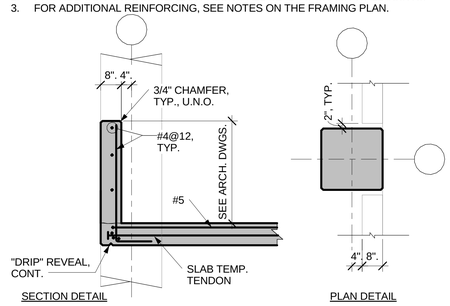
NOTE:
CONSTRUCTIONN JOINT BETWEEN TOP OF SLAB AND WEB AT THE UPTURNED BEAM MAY BE USED AT CONTRACTOR'S OPTION PROVIDED (1) SLAB IS SHORED UNTIL STRESSING OF THE UPTURNED BEAM IS COMPLETED AND APPROVED (2) WEB CONCRETE IS PLACED NO LATER THAN 24 HOURS FOLLOWING RESPECTIVE SLAB POUR.

13 TYPICAL UPTURNED BEAM REINFORCEMENT
N.T.S.

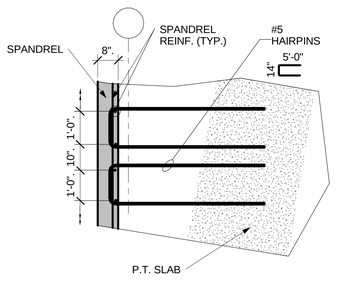


14 TYPICAL UPTURNED BEAM REINFORCEMENT DETAIL
N.T.S.

NOTES:
1. CRASH WALL SHALL NOT BE POURED MONOLITHICALLY WITH FLOOR SLAB.
2. PROVIDE CONTINUOUS SEALANT ALONG ALL SLAB TO CRASH WALL JOINTS.
3. FOR ADDITIONAL REINFORCING, SEE NOTES ON THE FRAMING PLAN.



15 TYPICAL CRASH WALL REINFORCEMNT
N.T.S.



16 REINFORCEMENT IN SLAB FOR CRASH WALL
N.T.S.

FINAL SUBMISSION

Scale: N.T.S.

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: FRAMING DETAILS - 1

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:50:00 AM

Checked: B.I.

Drawn: D.R.W.

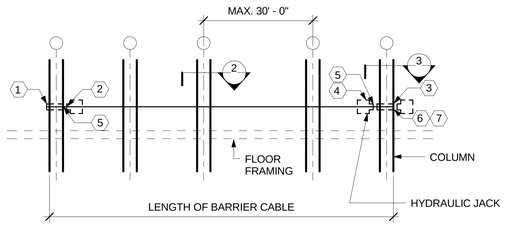
Project Number: 11159.00

Building Number:

Drawing Number: SF-503

Office of Construction and Facilities Management

Department of Veterans Affairs



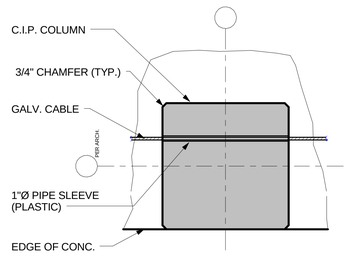
NOTES:

1. INSTALL BARRIER CABLES ONLY AFTER ALL STRUCTURES HAVE BEEN ERECTED AND ALL CONNECTIONS COMPLETED.
2. GAGE PRESSURE SHALL BE DETERMINED BY TENDON SUPPLIER.

LEGEND:

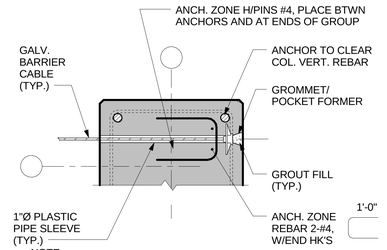
1. PLACE CABLES THROUGH COLUMNS AND ANCHORS. INSERT WEDGES.
2. BACK-STRESS THE TENDONS AT "DEAD END" COLUMN TO SEAT WEDGES. STRESS CABLES TO 25 KIPS FORCE
3. STRESS CABLES AT PULLING END TO 4,000 POUNDS
4. BACK-STRESS THE TENDONS AT "PULLING END" COLUMN ON THE FACE OPPOSITE THE INITIAL STRESSING FACE. TO SEAT WEDGES NOSE OF THE JACK SHALL BEAR ON A SLOTTED STEEL PLATE, NOT ON THE CONCRETE.
5. SPRAY RAM GRIPPER MARKS AND ANCHOR WEDGES MARKS WITH ZRC, GALVANOX OR EQUIVALENT.
6. MECHANICALLY TERMINATE EXCESS LENGTH OF CABLES AT END ANCORAGES. APPLY 2 COATS OF ZRC, GALVANOX OR EQUIVALENT, IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
7. FILL POCKETS IN COLUMNS WITH NON-SHRINK, NON-METALLIC 5,000 PSI GROUT

1 STRESSING PROCEDURE FOR GALVANIZED BARRIER CABLE
N.T.S.



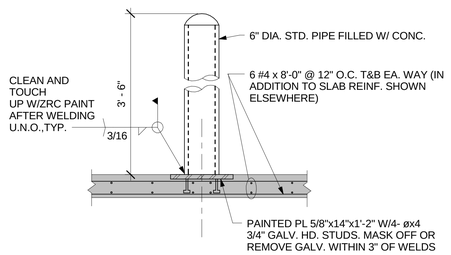
EXTERIOR

2 PARTIAL PLAN
N.T.S.

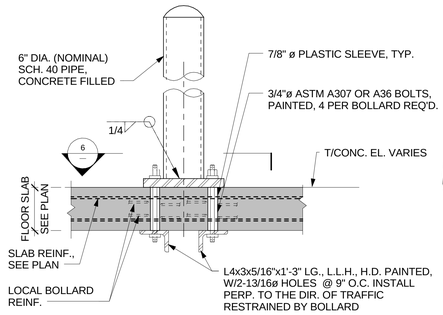


NOTE:
CABLE TO BE 1/2"Ø GALVANIZED P.C. CABLE MANUFACTURED TO CONFORM TO ASTM A-416 ULT. CAPACITY OF 33.4 KIPS MINIMUM.

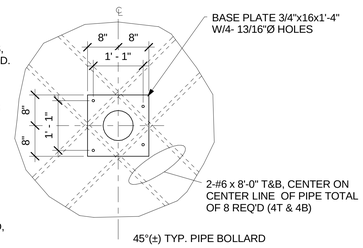
3 TYPICAL END ANCHORAGES FOR HORIZONTAL BARRIER CABLE
N.T.S.



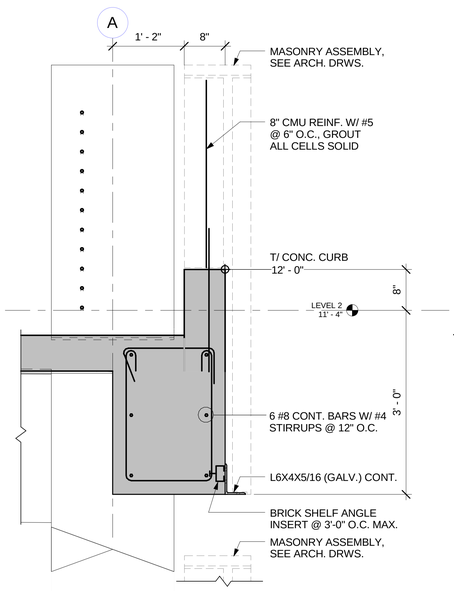
4 NON-REMOVABLE PIPE-BOLLARD TYP. DETAIL ON ELEVATED SLAB
N.T.S.



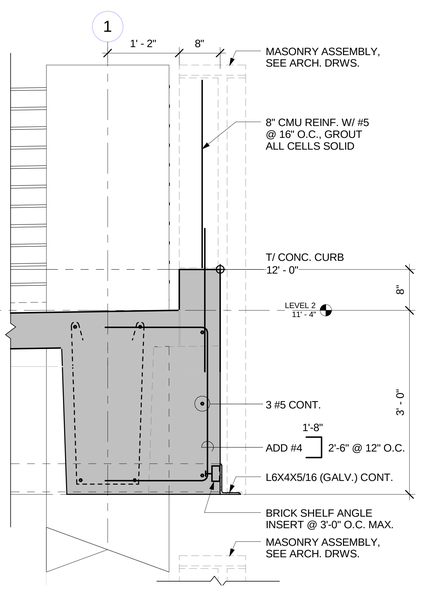
5 REMOVABLE PIPE-BOLLARD TYP. DETAIL ON ELEVATED SLAB
N.T.S.



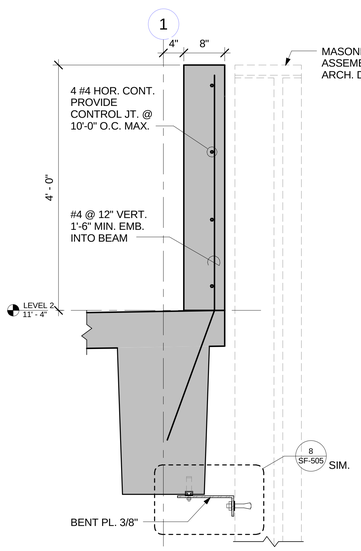
6 TYP. REMOVABLE PIPE-BOLLARD SECTION
N.T.S.



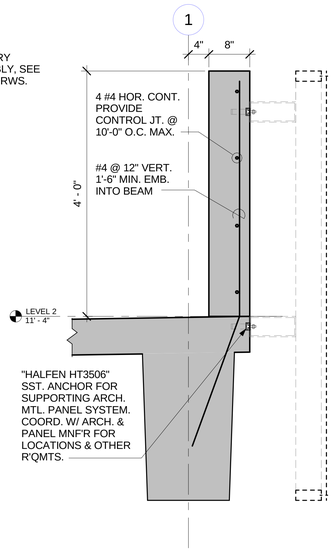
7 SECTION @ LINE A @ MASONRY SUPPORT
1" = 1'-0"



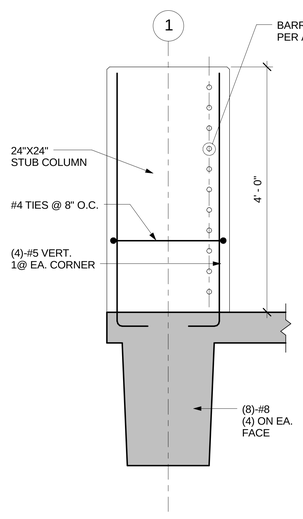
8 SECTION @ LINE 1 @ MASONRY SUPPORT
1" = 1'-0"



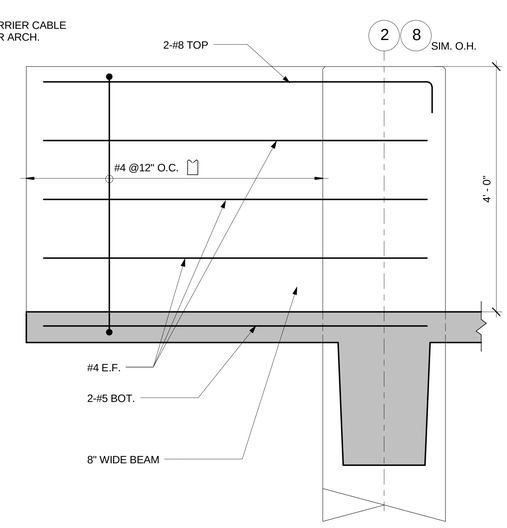
9 SECTION @ LINE 1 @ "CRASH WALL" @ MASONRY
1" = 1'-0"



10 SECTION @ LINE 1 @ "CRASH WALL" @ ARCH. SCREEN
1" = 1'-0"



11 TYPICAL STUB COLUMN DETAIL
NTS



12 SECTIONAL ELEVATION @ LINE E
NTS

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: FRAMING DETAILS - 2

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:50:01 AM

Checked: B.I.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: SF-504

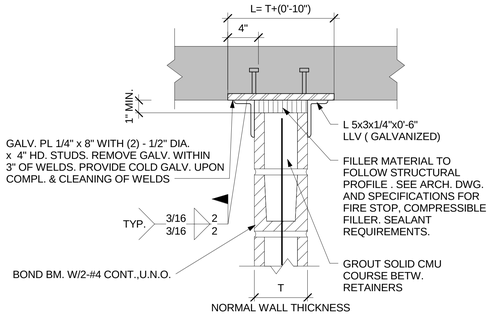
Office of Construction and Facilities Management

Department of Veterans Affairs

LINTEL NOTES AND SCHEDULE

1. MASONRY LINTELS LISTED FOR THE RANGE OF ROUGH MASONRY OPENING IN THE SCHEDULE BELOW APPLY TO NON-LOAD BEARING WALLS ONLY
2. LINTELS IN MASONRY WALLS SHALL BE PROVIDED FOR ALL OPENINGS AS INDICATED ON THE STRUCTURAL AND ARCHITECTURAL DRAWINGS. IN ADDITION, LINTELS ARE REQUIRED FOR ANY MECHANICAL, ELECTRICAL, OR PLUMBING OPENING IN A MASONRY WALL WITH A WIDTH GREATER THAN 12 INCHES.
3. LINTELS SHALL HAVE A MINIMUM BEARING OF 8" FOR SPANS UP TO 8'-0", AND 16" FOR SPANS GREATER THAN 8'-0". UNLESS NOTED, THEY SHALL BE OF THE SIZES LISTED BELOW.
4. C.M.U. OPENINGS MAY BE SPANNED WITH EITHER A STEEL LINTEL OR MASONRY LINTEL BLOCK, AT THE CONTRACTOR'S OPTION.
5. ALL LINTEL MEMBERS EXCEPT SINGLE ANGLES AND UNLESS NOTED OTHERWISE, SHALL BE CENTERED IN PLAN ON SUPPORTED MASONRY TO MINIMIZE EFFECT OR TORSION.
6. PLATE IN STEEL LINTEL SHALL BE WELDED AT BOTTOM OF RESPECTIVE STEEL SHAPE WITH 1/4" INTERMITTENT FILLET WELDS @ 12" O.C. PROVIDE CONTINUOUS 1/4"X2'-0" WELD ALONG COVER PLATE AT EITHER END ON EACH SIDE OF STEEL LINTEL.
7. PLATE WIDTH SHALL BE 1" LESS THAN THE ACTUAL WIDTH OF MASONRY.

CMU	SPAN	STEEL LINTEL	MASONRY LINTEL
4" WALL	4' 4' - 6' 6' - 8'	L3 1/2x3 1/2x5/16 L5x3 1/2x3/8 L6x3 1/2x3/8	
6" WALL	4' 4' - 6' 6' - 8'	WTx9 WT5x15 WT7x11	8" LINTEL BLOCK w/1–#4 8" LINTEL BLOCK w/2–#5 16" LINTEL BLOCK w/2–#5
8" WALL	4' 4' - 6' 6' - 8' 8' - 12'	2–L3 1/2x3 1/2x5/16 2–L5x3 1/2x3/8 2–L6x3 1/2x3/8 WT8x18 +3/8" PL	8" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#5
10" WALL	4' 4' - 6' 6' - 8' 8' - 12'	2–L3 1/2x3 1/2x5/16 2–L4x3x3/8 WT8x18 +3/8" PL WT8x24 +3/8" PL	8" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#5 8"+16" LINTEL BLOCK w/2–#5 EA..
12" WALL	4' 4' - 6' 6' - 8' 8' - 12'	3–L3 1/2x3 1/2x5/16 3–L5x3 1/2x3/8 W8x24 +3/8" PL W12x26 +3/8" PL	8" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#4 16" LINTEL BLOCK w/2–#5 8"+16" LINTEL BLOCK w/2–#5 EA.
CAVITY WALL	8' 8' - 12'	W8x24 +3/8" PL W12x26 +3/8" PL	



TYPICAL NON-LOAD BEARING CMU WALL HEAD DETAIL

1 N.T.S.

NOTES

1. THIS DETAIL NEED NOT BE USED WHEN THE SUBJECT WALL IS PLACED BETWEEN INTEGRALLY BUILT INTERSECTING SIMILAR WALLS AND THE RESULTING HORIZONTAL SPAN DOES NOT EXCEED 36*T, WHERE T IS THE NOMINAL WALL THICKNESS
2. THE FOLLOWING INFORMATION SHALL BE USED WITH THIS DETAIL FOR INFORMATION PARTITIONS WITH THE MAXIMUM WIND PRESSURE OF 5 PSF AND NOT SUBJECT TO VEHICULAR (PASSENGER CAR)IMPACT.

MAXIMUM CONNECTION SPACING						
NOMINAL WALL THICKNESS	WALL HEIGH (FEET)					
	9	12	15	18	21	24
4"	4'-0"	3'-6"	--	--	--	--
6"	5'-6"	4'-6"	4'-0"	3'-6"	--	--
8"	7'-0"	6'-6"	5'-6"	5'-0"	4'-6"	4'-0"

3. EXTERIOR MASONRY WALLS SUBJECT TO VEHICULAR IMPACT AND WIND LOADS IN EXCESS OF 5 PSF SHALL BE REINFORCED. TOPS OF SUCH WALLS MAY NOT BE BRACED FOR WALL HEIGHTS NOT EXCEEDING RESPECTIVE LIMITS FOR CANTILEVER WALLS IN SCHEDULES BELOW. WHEN BRACED AT TOP AND BOTTOM IN ACCORDANCE WITH DETAIL 1, THIS DRAWING, HEIGHT OF SUCH WALLS SHALL NOT EXCEED THE FOLLOWING LIMITS:
   8" THICK --- 20'-0"
   10" THICK --- 22'-0"
   12" THICK --- 24'-0"

4. THE FOLLOWING REINFORCEMENT INFORMATION SHALL APPLY TO EXTERIOR CMU WALLS SUBJECT TO WIND OR VEHICULAR (PASSENGER CAR) IMPACT AS APPLICABLE. THE MOST STRINGENT OF THE APPLICABLE CONDITIONS SHALL APPLY.

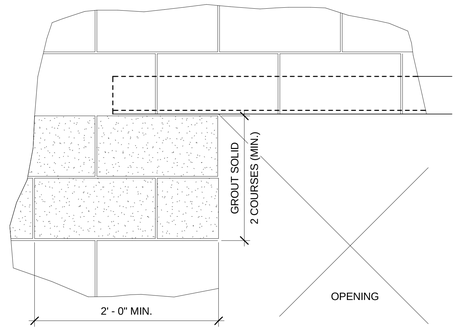
VEHICULAR IMPACT – WALL HEIGHT, MAX (FT)						
NOMINAL WALL THICKNESS, T	CANTILEVER			BRACED		
	9	10	11	20	22	24
8"	#5@16"	--	--	#5@16"	--	--
10"	#5@24"	#5@24"	--	#5@24"	#5@24"	--
12"	#5@32"	#5@32"	#5@32"	#5@32"	#5@32"	#5@32"

WIND LOAD 20 PSF – WALL HEIGHT, MAX (FT)						
NOMINAL WALL THICKNESS, T	CANTILEVER			BRACED		
	9	10	11	20	22	24
8"	#4@24"	--	--	#5@32"	--	--
10"	#4@32"	#4@24"	--	#5@40"	#5@32"	--
12"	#4@40"	#4@32"	#4@24"	#5@32"	#5@40"	#5@32"

5. TOP OF WALL BRACING CONNECTIONS FOR EXTERIOR MASONRY WALLS SUBJECT TO VEHICULAR IMPACT AND WIND LOADS, WHEN REQUIRED, SHALL NOT BE SPACED FURTHER APART THAN 5'-0".

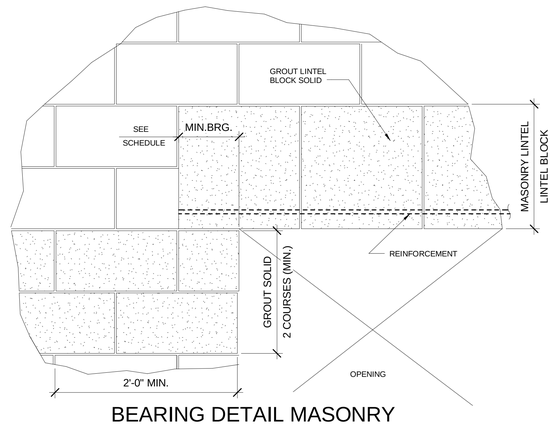
6. ALL EXTERIOR MASONRY WALLS SUBJECT TO VEHICULAR IMPACT AT PARKING AREAS OR DRIVE ISLES, SHALL BE FULLY GROUTED FROM THE BEARING UP TO A HEIGHT OF 2'-8" (±) ABOVE FINISHED FLOOR.

7. PROVIDE 1" GAP JOINT BETWEEN MASONRY WALLS AND CONCRETE WALLS, COLUMNS AND BEAMS, U.N.O. FILL JOINT WITH BACKER ROD AND SEALANT, UNLESS NOTED OR SHOWN OTHERWISE.



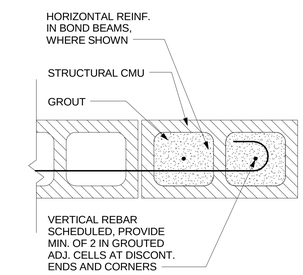
BEARING DETAIL STEEL LINTEL IN CMU WALL

2 N.T.S.



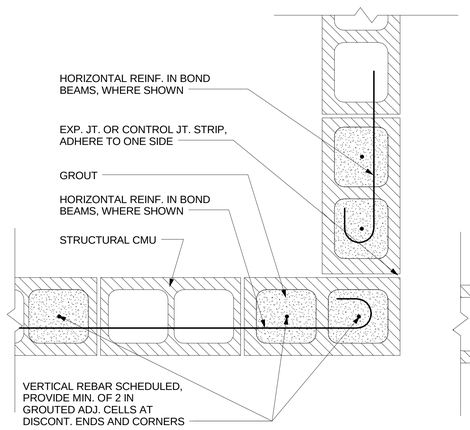
BEARING DETAIL MASONRY LINTEL IN CMU WALL

3 N.T.S.



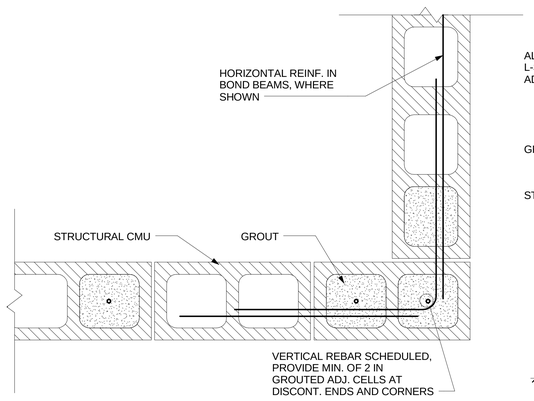
TYPICAL DETAIL DISCONT. END OF CMU WALL

4 N.T.S.



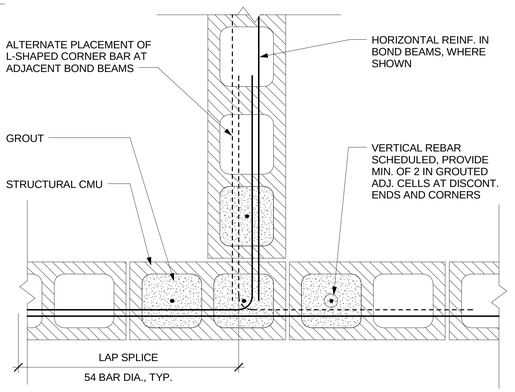
DISCONT. WALLS TYPICAL DETAIL CMU WALL CORNER

5 N.T.S.



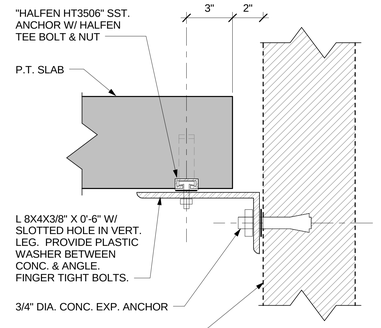
CONT. WALLS CMU WALL CORNER

6 N.T.S.



TYPICAL DETAIL CMU WALL INTERSECTION

7 N.T.S.



NOTE:
PROVIDE CONNECTIONS THUS @ 4'-0" O.C. MAX.

LATERAL SUPPORT @ SLAB EDGE DETAIL

8 3" = 1'-0"

FINAL SUBMISSION

Scale: As indicated

No.	Description	Date
	FINAL SUBMISSION	9/24/2013
Revisions:		Date

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Drawing Title: MASONRY RIENF. DETAILS, NOTES, & SCHEDULES

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:50:03 AM

Checked: J.H.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: **SF-505**

Office of Construction and Facilities Management

Department of Veterans Affairs

POST-TENSIONED FLOOR BEAM AND GIRDER SCHEDULE

Mark	DIMENSIONS WIDTH (IN.) B1	B2	DEPTH (IN.) D	SKETCH OF CROSS SECTION	NO. OF 0.5" DIA. TENDONS	TENDON PROFILE (INCHES) A	B	C	REINFORCEMENT TOP BARS TL	TM	TR	BOTTOM BARS BL	BM	BR	SIDE BARS EA. FACE U.N.O	STIRRUPS SIZE	TYPE	SPACING EA. END, U.N.O.	HORIZONTAL MILD STEEL BAR DIAGRAM LEFT SUPPORT	RIGHT SUPPORT	REMARKS
2-PB1-1	18	16	36		12	24	4	32	2-#10	2-#5	2-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2-PB1-2	18	16	36		12	32	8	32	-	2-#5	2-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2-PB1-3	18	16	36		12	12	11	32	2-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB2-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB2-2	18	16	36		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB2-3	18	16	36		24	22	4	32	3-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB3-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB3-2	18	16	30		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB3-3	18	16	36		24	22	4	32	3-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB4-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB4-2	18	16	36		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB4-3	18	16	36		24	22	4	32	3-310	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB5-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB5-2	18	16	36		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB5-3	18	16	36		24	22	4	32	3-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB6-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB6-2	18	16	36		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB6-3	18	16	36		24	22	4	32	3-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB7-1	18	16	36		24	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB7-2	18	16	36		24	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB7-3	18	16	36		24	22	4	32	3-#10	2-#5	-	2-#7	2-#9	-		#4		12@6, BAL.@18			
2PB8-1	18	16	36		22	22	4	32	3-#10	2-#5	3-#10	2-#7	2-#9	2-#7		#4		12@6, BAL.@18			
2PB8-2	18	16	36		22	32	7	32	-	2-#5	3-#10	-	2-#9	2-#7		#4		12@6, BAL.@18			
2PB8-3	18	16	36		22	22	4	32	3-#10	2-#5	-	2-#9	2-#9	-		#4		12@6, BAL.@18			
2PB9-1	16	16	55		10	25	11	45	2-#9	2-#9	2-#9	2-#9	2-#9	2-#9	3-#5	#4		12@6, BAL.@12			
2PB9-2	16	16	55		10	45	21	45	-	2-#9	2-#9	-	2-#9	2-#9	3-#5	#4		12@6, BAL.@12			
2PB9-3	16	16	55		10	25	12	45	2-#9	2-#9	-	2-#9	2-#9	-	3-#5	#5		12@6, BAL.@12			
2PG1	24	24	36		48	22	4	22	4-#11	4-#11	4-#11	4-#11	4-#11	4-#11		#5		12@6, BAL.@12			
2PG2	24	24	36		48	22	4	22	4-#11	4-#11	4-#11	4-#11	4-#11	4-#11		#5		12@6, BAL.@12			
2RB1	14	14	55																		SEE DET. 12/SF-504
2RB2	14	14	55																		SEE DET. 12/SF-504

SHEET NOTES:

1. REFER TO THE FOLLOWING TABLE FOR REFERENCE SHEETS:

ITEM	SHEET NUMBER
COLUMN DETAILS	SF-602
COLUMN SCHEDULE	SF-602
FLOOR ELEVATIONS	ARCHITECTURAL DWGS
GENERAL NOTES	SB-001, SB-002 & SF-001
POST-TENSIONED SECTIONS AND DETAILS	SF-501 THRU SF-502
TYPICAL DETAILS	SF-503 THRU SF-505

2. BEAM MARKS SHOWN IN PLAN HAVE BEEN PLACED AT RESPECTIVE BEAMS LEFT ENDS.
3. ANCHORAGES FOR ADDITIONAL TENDONS (SO NOTED ON DRAWINGS) SHALL BE LOCATED AT THE QUARTER POINT OF THE ADJACENT SPAN AND AT THE CENTER OF GRAVITY OF THE BEAM SECTION, PROVIDE BACK-UP REINFORCEMENT AT ANCHORAGE
4. TO ALLEVIATE CONGESTION AT INTERIOR BEAM AND COLUMN INTERSECTION, THE BEAM BOTTOM REINFORCEMENT MAY BE PLACED IN TWO LAYERS, TOP REINFORCEMENT MUST BE IN ONE LAYER UNLESS NOTED OTHERWISE. BEAM TOP LONGITUDINAL BARS MAY BE PLACED IN SLAB ON EITHER SIDE OF BEAM WEB WITHIN A DISTANCE OF 1.50 TIMES THE SLAB THICKNESS CLEAR, EITHER SIDE. HOWEVER A MINIMUM OF 2 BARS MUST BE PLACED WITHIN THE BEAM-COLUMN JOINT. EXTEND ALL TOP BARS INTO ADJOINING SLAB.
5. FOR BEAM PENETRATIONS, SEE DETAIL 1 ON DRAWING SF-503. THE CONTRACTOR SHALL COORDINATE EXACT LOCATION AND SIZE OF OPENINGS WITH OTHER DISCIPLINES REQUIRING PENETRATIONS AS SHOWN ON THE RESPECTIVE SUB-CONTRACTOR'S SHOP DRAWINGS. CONSULT PRIME ARCHITECT IF THE SIZE OF THE REQUIRED OPENING EXCEEDS THE LIMITS IN THE ABOVE DETAILS. SPECIAL DESIGN MODIFICATIONS MAY BE REQUIRED.
6. ALL P.T. TENDON AND MILD STEEL REBAR SHOP DRAWINGS MUST SHOW GRID DESIGNATION AND GRID DIMENSIONS IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
7. FOR OPEN STIRRUPS SEE THE SCHEDULE ABOVE, PROVIDE SAME SIZE CAP FOR THE FIRST 6 STIRRUPS @ EACH END ONLY.
8. SEE DETAIL 8/SF-503 FOR TYPICAL BEAM AND DETAIL 6/SF-502 FOR BEAM REINFORCEMENT AND P.T. INFORMATION.

FINAL SUBMISSION

Scale: 1" = 1'-0"

No.	Description	Date
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Revisions:		Date

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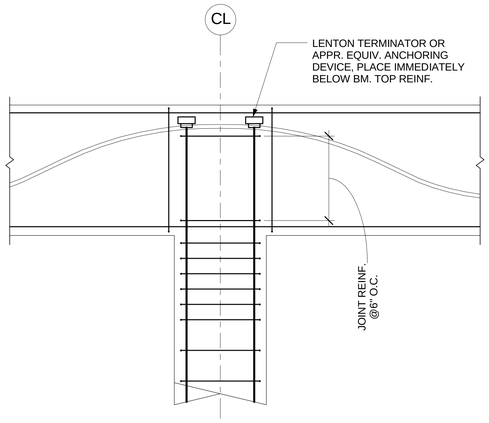
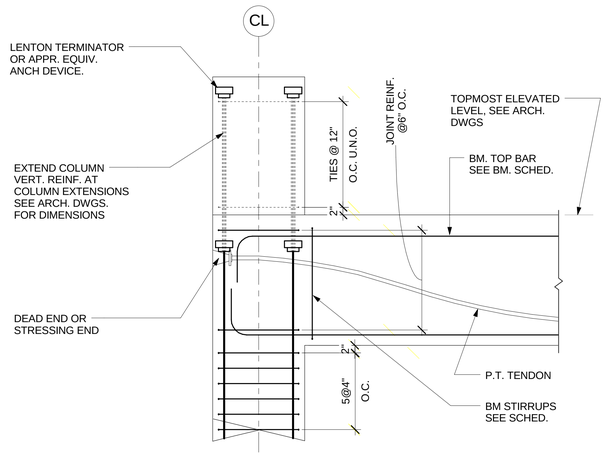
Drawing Title: POST-TENSIONING BEAM SCHEDULE
Approved: J.H.
Project Title: VA Erie Parking Structure
Location: Erie, PA
Date: 9/19/2013 10:50:04 AM
Checked: J.H.
Drawn: D.R.W.
Project Number: 11159.00
Building Number:
Drawing Number: SF-601

Office of Construction and Facilities Management
Department of Veterans Affairs



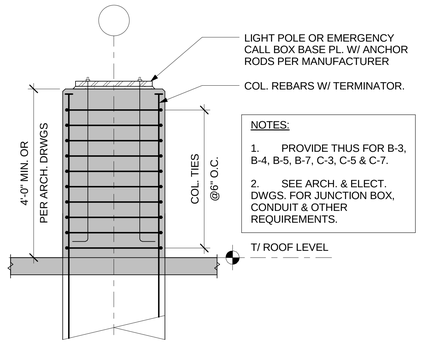
1 TYP. INTERIOR BM./COL. JT. DETAIL
3/4" = 1'-0"



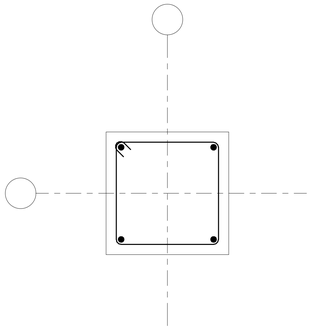
2 TYP. COLUMN BAR PLACEMENT DETAIL
3/4" = 1'-0"

PARKING STRUCTURE COLUMN SCHEDULE

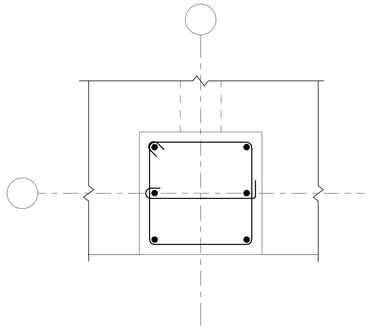
LOCATION		A-1 THRU A-9 D-9, D-2.1 E-2 THRU E-8					B-1, B-3, B-4, B-5 C-1, C-3, C-5					B-2, B-6 C-2, C-4, C-6					B-7, B-9 C-7, C-9				
LEVEL	27 TOTAL	COL. SIZE (IN)	CONC. STRENGTH	PATTERN	VERTICAL REINF.	TIES	COL. SIZE (IN)	CONC. STRENGTH	PATTERN	VERTICAL REINF.	TIES	COL. SIZE (IN)	CONC. STRENGTH	PATTERN	VERTICAL REINF.	TIES	COL. SIZE (IN)	CONC. STRENGTH	PATTERN	VERTICAL REINF.	TIES
TOP OF COLUMN 15'-4"																					
SECOND LEVEL 11'-4"																					
FIRST LEVEL 0'-0"		24x24	5000	DET. 5	6#14	#4@6"	24x24	5000	DET. 4	#14	#4@6"	24x24	5000	DET. 4	#14	#4@6"	24x24	5000	DET. 6	6#14	#4@6"
T/FDN. EL. SEE PLAN																					
DOWEL DETAILS		DETAIL 1					DETAIL 1					DETAIL 1					DETAIL 1				
DOWEL		4#8					4#8					4#8					4#10				
NOTES:												PROVIDE REBAR TERMINATORS									



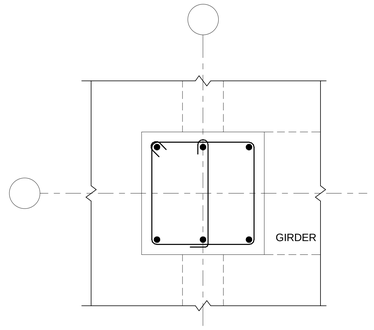
3 LIGHT POLE BASE DETAIL
1/2" = 1'-0"



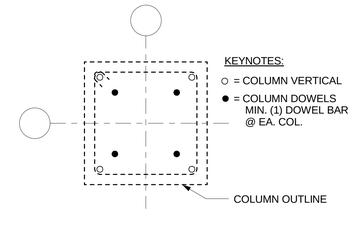
4 4 - COL BAR CONFIG
1" = 1'-0"



5 6 - COL BAR CONFIG TYPE 1
1" = 1'-0"



6 6-COL BAR CONFIG TYPE 2
1" = 1'-0"



7 TYPICAL COLUMN DOWEL DETAIL
1" = 1'-0"

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216.522.1350

Drawing Title: COLUMN SCHEDULE, DETAILS, AND NOTES

Approved: J.H.

Project Title: VA Erie Parking Structure

Location: Erie, PA

Date: 9/19/2013 10:50:05 AM

Checked: J.H.

Drawn: D.R.W.

Project Number: 11159.00

Building Number:

Drawing Number: SF-602

Office of Construction and Facilities Management

Department of Veterans Affairs